IN THE

Supreme Court of the United States

October Term, 1976.

No. 76-284

SUN SHIPBUILDING & DRY DOCK CO.,
Petitioner,

v.

THE UNITED STATES,
Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF CLAIMS.

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PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF CLAIMS.

The petitioner, Sun Shipbuilding & Dry Dock Company, respectfully prays that a writ of certiorari issue to review the Order of the United States Court of Claims, granting summary judgment to the respondent and third party United States Lines, Inc. and dismissing Count II of the petitioner's First Amended Complaint, entered in this proceeding on May 28, 1976.

OPINION BELOW.

The Order of the Court of Claims, not yet reported, appears in the Appendix hereto.

JURISDICTION.

The Order of the Court of Claims was entered on May 28, 1976 and this petition for a writ of certiorari was filed within ninety days of that date. This Court's jurisdiction is invoked pursuant to 28 U. S. C. § 1255(1).

QUESTION PRESENTED.

Did the Court of Claims significantly misapply the substantial evidence requirement of Section One of the Wunderlich Act, 41 U. S. C. § 321 in holding that the determination of the Department of Commerce, denying Sun Shipbuilding & Dry Dock Company full and adequate compensation for the additional costs incurred in carrying out changes ordered by the government and owner pursuant to a Maritime Administration subsidy contract, was supported by substantial evidence?

STATUTORY PROVISION INVOLVED.

Section One of the Wunderlich Act, 41 U. S. C. §§ 321; set forth in the Appendix to this Petition.

STATEMENT OF THE CASE.

A. Factual Background.

In July, 1962, the United States Lines ("USL") and the United States, through the Maritime Administration ("MarAd"), pursuant to the Ship Construction Subsidy Program, 46 U. S. C. §§ 1101, 1151-61, solicited bids for the construction of a flight of five cargo vessels. Sun Shipbuilding & Dry Dock Company ("Sun") was the low bidder and on October 10, 1962 entered into the contract with MarAd and USL for the construction of these five vessels. Under the terms of the contract, MarAd was to subsidize the cost to USL of the construction of these ships to the extent of 48.6%.

The contract provided that the five vessels were to be delivered as follows:

(1) Hull 628 on or before September 29, 1964;

(2) Hull 629 on or before December 13, 1964;

(3) Hull 630 on or before February 25, 1965;

(4) Hull 631 on or before May 12, 1965;

(5) Hull 632 on or before July 26, 1965.

However, Sun's low bid was predicated upon its ability to deliver the ships substantially before those dates. Thus, in November, 1962, shortly after the Contract was signed, Sun scheduled the first ship for delivery in July, 1964 with the succeeding ships to follow at 75-day intervals. This schedule was presented to MarAd and USL who did not dispute its reasonability (A229-30, A238-39).

Sun had the capacity and the ability to meet the accelerated schedule, and the shipyard embarked on a program designed to deliver the first ship in July, 1964.

Sun's November schedule called for the laying of the keel for the first ship in June, 1963. However, the first keel was actually laid on May 15, 1963, almost one month early (A134, A190). At about that time, however, USL and MarAd were actively considering a radical departure from the specifications of these five vessels, automating the ships' engine rooms (A126-27, A236).

Automating the engine room was a critical and technically difficult addition to the work required on these ships. In addition to being technically demanding, the change (which became known as Change Order 23) added a significant amount of work to the shipyard (A222-29, A245-50).

All parties recognized that the implementation of this change would seriously delay the delivery of these ships. Sun preliminarily estimated that delay at 60 days per ship (A134). Nonetheless, on May 31, 1963, MarAd and USL ordered Sun to perform the change. Sun immediately commenced a program to design, procure and ultimately install the sophisticated electronic components required to make Change 23 a reality. Of course, at that same time Sun continued to perform the unchanged work which was necessary to complete the ships (A223-28).

Throughout the summer of 1963, Sun's personnel continued to work diligently on these ships as required by the contract. However, on September 12, 1963, Sun was informed for the first time of the possibility that the quarters on these ships might be substantially revised (A136). Sun promptly protested this proposed quarters change indicating that it would significantly increase the cost of these vessels because much design and engineering work would have to be redone and this extra work should substantially delay the ships' delivery by about 90 days. Notwithstanding Sun's strong protestations, MarAd and

USL ordered Sun to perform the quarters change (Change Order No. 48) on October 1, 1963. Sun immediately began work on revising quarters in accordance with MarAd's and USL's directions in an attempt to minimize the delay. However, in February, 1964, USL and MarAd ordered still further revisions to the quarters even though Sun estimated that the supplemental revision would delay the ships an additional six to eight weeks each (A142).

The effect of these substantial changes was massive. They increased Sun's engineering workload over 20 percent by adding 50,000 engineering hours to the design task. In addition, the changes added almost 150,000 production hours, mostly in the work allocated to the Sun electrical department.

Despite these complex and significant changes, Sun performed the contract extremely expeditiously and actually delivered the ships as follows[1]:

Hull 629 on November 12, 1964;

Hull 628 on January 15, 1965;

Hull 630 on April 14, 1965;

Hull 631 on June 29, 1965;

Hull 632 on September 24, 1965.

This is an average of only 44 days later than the contract delivery dates. Following delivery of the last ship on September 24, 1965, Sun, in accordance with the requirements of the contract, submitted its final estimate of increased costs resulting from the issuance of Changes 23 and 48 and the delays caused thereby.

The tripartite contract required the shipbuilder to carry out any changes ordered by the owner or MarAd.

1. Hulls 628 and 629 were interchanged by agreement of the parties.

It further provided that the shipbuilder would be compensated for the cost of these changes as follows:

> "One hundred and ten per cent (110%) of the net increase in estimated cost, if any, resulting from all change cost estimates, as approved or finally determined, shall be added to the contract price as an adjustment thereof."

B. Proceedings Below.

In an attempt to secure the compensation apparently assured by the Contract, Sun began working its way through a labyrinth of hearings and decisions. Sun submitted an original formal claim to the contracting officer in the amount of $5,218,516, plus a profit of ten percent or $5,740,368. On August 21, 1969 the contracting officer, having heard no testimony, concluded that $2,200,000 was the fair and reasonable value of the work.

The decision of the contracting officer was appealed to the Maritime Subsidy Board of the Department of Commerce which referred the case to its Chief Hearing Examiner to conduct a hearing and prepare a recommended decision. A hearing was held between December 1, 1969 and January 20, 1970, with counsel for Sun, USL and MarAd participating. In presenting its case, Sun demonstrated that the cost of the changes, including the contractually provided profit of 10%, was $6,688,893. After considering the matter for over four months, the Chief Hearing Examiner filed a Recommended Decision proposing that Sun receive $3,820,120 including profit (A120-214).

All three parties took exception to the Recommended Decision. Briefs and argument were submitted to the Maritime Subsidy Board. Purporting to review the Recommended Decision, but in effect, picking and choosing isolated bits of testimony, in a way not supported by the

record, the Maritime Subsidy Board reduced Sun's award to $2,798,882 (A31-114).

In January, 1972, the Secretary of Commerce reviewed the Board's award. Upon that review, the Secretary increased the amount to be recovered by Sun to $3,070,000 (A26-30).

Sun, believing that in certain respects neither the Recommended Decision, nor the decision of the Maritime Subsidy Board, nor the Secretary's final award was supported by substantial evidence, filed a petition in the Court of Claims.[2] Sun specifically identified three areas in which the compensation awarded by the Department of Commerce was not supported by substantial evidence. In each of these areas Sun had put forward substantial evidence of the costs associated with the changes. Neither the United States nor USL, joined as a third-party pursuant to Court of Claims Rule 41 (a), had put forward substantial evidence of its own. Rather each either merely attempted unsuccessfully to find gaps in Sun's proof or to present theoretical constructs which might explain their position. The three areas involved in the dispute were:

> 1. That the Department of Commerce, without substantial evidence, understated the number of days of delay caused by changes 23 and 48.
>
> 2. That the Department of Commerce's refusal to allow "hire-fire" costs which were properly attributed to the delay resulting from changes 23 and 48 was not supported by substantial evidence.

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2. In Count I of its Final Amended Petition, Sun sought a judgment against the United States for breach of a provision of the contract which made the United States liable in the event the owner defaulted on progress payments. The Court of Claims denied Sun's motion for summary judgment on Count I and granted the motion of the United States for summary judgment. A petition for a writ of certiorari was denied. 419 U. S. 1021 (1974).

3. That in calculating "normal hull production rate" to determine the amount of continuing overhead caused by the delays arising from the changes, the Department of Commerce again acted in a way not based on substantial evidence.

It was Sun's position that, in each of these cases, Sun, alone, had produced substantial evidence to support the compensation it sought. It was Sun's further contention that the unsupported theories of USL and MarAd are not substantial evidence as that term is used in the Wunderlich Act.

The Court of Claims referred the matter to Senior Trial Judge Mastin C. White for a recommended decision. Judge White, in a recommended decision filed October 14, 1975 concluded that the decision of the Secretary of Commerce denying Sun "hire-fire" costs was not supported by substantial evidence. He, therefore, recommended that Sun be awarded these costs. The Trial Judge did, however, find that the decision of the Secretary of Commerce on two other points, including the number of days of delay caused by the changes, was supported by substantial evidence (A5-25).

All three parties requested that the Court of Claims review the recommended decision. In a two-page Order filed May 28, 1975, the Court of Claims affirmed the Trial Judge's recommended decision as it applied to the "days of delay" issue. Surprisingly, however, the Court reversed the recommended decision's determination that the Department of Commerce's position on "hire-fire" was not supported by substantial evidence (A2-4). Thus, the decision of the Secretary of Commerce, awarding Sun $3,070,000 was permitted to stand, in spite of the absence of substantial evidence supporting these main aspects of the award. The only recourse available to Sun is to petition this Court for a writ of certiorari. Unless such writ is granted, Sun will receive less than one-half of cost of the changes. And, such an unjust result will be based on a significant misapplication of the Wunderlich Act.

REASON FOR GRANTING THE WRIT.

The Court Below, in Affirming the Award of the Department of Commerce, Misapplied the Requirement of the Wunderlich Act That a Decision Be Supported by Substantial Evidence.

Sun performed expensive, disruptive and elaborate changes to these five vessels, as required by USL and MarAd. Sun, to date, has not been properly compensated for the cost of these changes. The determination by the Court of Claims that the Department of Commerce award was not unsupported by substantial evidence misconstrues that term as it is used in the Wunderlich Act. Sun believes that, by setting forth the evidence it produced to support two of its contentions, and contrasting that evidence to the submissions of MarAd and USL, this honorable Court will conclude that the determination by the Department of Commerce was not correct and that in affirming that determination, the Court of Claims seriously misconstrued the Wunderlich Act.

Section One of the Wunderlich Act, 41 U. S. C. § 321, provides:

> "No provision of any contract entered into by the United States, relating to the finality or conclusiveness of any decision of the head of any department or agency or his duly authorized representative or board in a dispute involving a question arising under such contract, shall be pleaded in any suit now filed or to be filed as limiting judicial review of any such decision to cases where fraud by such official or his said representative or board is alleged: *Provided, however,* That any such decision shall be final and conclusive unless the same is fra[u]dulent or capricious or arbitrary or so grossly erroneous as necessarily to imply bad faith, or is not supported by substantial evidence.

This Court, on several occasions, has addressed the "substantial evidence" requirement. In *United States v. Carlo Bianchi & Co., Inc.*, 373 U. S. 709 (1963), the Court stated:

> "The term 'substantial evidence' in particular has become a term of art to describe the basis on which an administrative record is to be judged by a reviewing court. This standard goes to the reasonableness of what the agency did *on the basis of the evidence before it.*" 373 U. S. at 715. [emphasis in original]

In *Universal Camara Corp. v. NLRB*, 340 U. S. 474 (1951) this Court analyzed, in some detail, the scope of review Congress contemplates when it employs the term "substantial evidence." This Court concluded:

> "The substantiality of evidence must take into account whatever in the record fairly detracts from its weight . . .
>
> . . . .
>
> Congress has merely made it clear that a reviewing court is not barred from setting aside a Board decision when it cannot conscientiously find that the evidence supporting that decision is substantial, when viewed in the light that the record in its entirety furnishes, including the body of evidence opposed to the Board's view." 340 U. S. at 488.

In ratifying the award of the Department of Commerce, the Court of Claims significantly misapplied that standard. Sun believes that a review of the evidence, in two areas, as presented to the Court of Claims, demonstrates that only

Sun presented substantial evidence to that Court. Sun further believes that, in view of the brief and unenlightening Order of the Court of Claim, such a presentation offers the most effective vehicle by which Sun can illustrate this misapplication of the substantial evidence standard.

a. The Only Substantial Evidence Before the Department of Commerce Demonstrated That Each Vessel Was Delayed 120 Days.

Had changes 23 and 48 not been required, Sun would have delivered the first vessel in mid-July, 1964, 75 days prior to the delivery date of September 29, 1964 established by the contract and 120 days prior to the actual November 12, 1964 delivery.

In the Court of Claims, it was recognized by all three parties that the total number of days between contract delivery dates for the five vessels and actual delivery dates—23 days—are delay days attributable solely to Changes 23 and 48 (A11-12). The dispute thus focused on the amount of delay *before* the contract delivery dates which was attributable to Changes 23 and 48. This issue arose because Sun established in the administrative proceedings that it clearly intended, prior to executing the contract, to deliver the vessels early, beginning in July 1964, rather than on the contract date for delivery of the first vessel September 29, 1964, and that meeting this July delivery date was crucial to Sun's estimate of costs upon which its low bid was based (A215-17).[3] Sun likewise established that it had notified the United States and USL that delivery of the first vessel was set for July 1964 and that it had the capability to meet this early delivery schedule (A215-17, A229-30, A230-31, A231-33, A238-39). The final administrative decision held that Sun would have delivered each of the five ships 15 days before the contract delivery dates set forth in the contract.[4]

In the Court of Claims, the United States supported the final administration determination of 15 days pre-contract delivery date delay per vessel. USL argued that the administrative decision was without basis in fact in finding *any* pre-contract delivery date delay. Sun argued that there is not substantial evidence to support only 15 days pre-contract delivery date delay per vessel. Thus, the issue before the Court of Claims was whether there was substantial evidence in the record to support the administrative finding that there was *only* 15 days pre-contract delivery delay per vessel (A10-12).

Any review of the record in this case in search for substantial evidence in support of the administrative finding of only 15 days pre-contract delivery date delay per vessel must start with the acknowledgement that the record contains overwhelming evidence to the effect that the changes added over 120 days of work per vessel to the job (or 75 pre-contract delivery date days). Sun produced four knowledgeable witnesses who each testified to this effect; Mr. Atkinson, the President of Sun, Mr. Maling, Sales Manager, New Ship Sales, Mr. Zeien, Vice-President of Engineering, and Mr. McNeal, Supervisor of the Electrical Engineering Department. Their testimony described in detail, the complex and time consuming tasks added by the changes and was uncontradicted (A215-17, A231-33, A234-36, A245-50).

Any evidence which would support the completely contrary conclusion that there was *only* 15 such delay days per vessel must be measured against this clear and un-

3. The parties have recognized that the follow-on ships would have been delivered at 75-day intervals, and the dispute thus revolves around the delivery date of the first ship if the changes had not been directed.

4. The Secretary of Commerce reinstated the Recommendation of the Hearing Examiner, who had actually heard the evidence. The Maritime Subsidy Board had disregarded the finding of the Hearing Examiner and found no pre-contract delivery date delay.

equivocal testimony that the changes caused 75 pre-contract delivery date delay days per vessel. The only direct testimony which has been cited in support of this contrary conclusion is that of Edward Scott Dillon, then Deputy Chief, Office of Ship Construction, Maritime Administration, who stated at one point in his testimony:

> I now feel that the first ship, hull 629, would have been delivered somewhere between 30 and 0 days prior to contract delivery date had it not been for changes 23 and 48 (A221).

When pressed as to what time period he would give if he "had to make the precise period," he stated:

> It is not possible to pick up the precise date under these circumstances, I would say 15 days prior to the delivery date (A221).

This is both the origin and the only direct support for the 15 days. Were this unequivocal testimony, uncontradicted by Mr. Dillon himself, and based on documentary evidence of record, it might be arguably sufficient to stand against the direct and uncontradicted testimony of the four Sun witnesses. However, this testimony, questionable at its inception, completely falls apart when examined in the context of Mr. Dillon's total testimony.

Twenty-six pages after the above-quoted passage, Mr. Dillon was confronted with a document which he wrote and which concluded that the changes added at least 75 days of work per vessel (or 30 days pre-contract delivery date delay). He admitted that this was his opinion when he wrote it and was still his opinion (A221-22). Thus, Dillon himself did not believe the 15 day figure which he had earlier settled upon. Such testimony was also inconsistent with other Dillon testimony that the addition of

about 7500 additional engineering hours resulting from an addendum involving a single plane engine added two weeks work to the delivery schedule of the first ship (A220-21). By this analysis, the addition of over 50,000 engineering hours required for Changes 23 and 48 would have itself caused over 100 days of delay per vessel (or 65 days pre-contract delivery date delay), without even taking into account the additional installation work.[5]

Although the United States relied upon Mr. Dillon's testimony, USL did not. But the most damning indictment of Mr. Dillon was by the Senior Trial Judge, who pointed out that Dillon testified as an expert on the basis of unidentified documents:

> . . . Mr. Dillon's opinion testimony, being based largely on undisclosed documents, could not, if standing alone, reasonably be regarded as "substantial" in the face of conflicting evidence from *Sun's witnesses who were in charge of the construction of the five ships and testified from personal knowledge of the fact involved in the construction program.* (A16) (Emphasis Added)

Up to this point, Sun would not take exception to the opinion of the Senior Trial Judge had it been adopted by the Court of Claims. However, the opinion goes on to add the Dillon testimony, which it has just recognized as insubstantial, to evidence of other delay factors cited in the USL brief and to conclude that, considering these two items of evidence together, a reasonable man *might* be convinced of the reasonableness of the 15 day conclusion reached

5. A simple analysis of the 50,000 engineering hours required for these changes independently confirms the realism of the clear and unequivocal testimony that the changes caused 120 additional days of work per vessel (or 75 pre-contract delivery date days). Sun had only 85 engineers available to work on this contract. If 60 percent of these engineers worked full time on the changes, it would take over 120 days for the engineering alone (A233).

in the administrative decision (A16-17). The opinion does not go on to analyze this other evidence, stating that "the court is not permitted in a Wunderlich Act case to weigh conflicting evidence on a disputed question of fact, once it has decided that the administrative determination is supported by evidence that can properly be regarded as substantial." (A17). Such a standard is not consistent with this Court's directives.

Sun has considerable difficulty with the failure of either the Senior Trial Judge or the Court of Claims to analyze and weigh the cited evidence of other delay factors, especially when the opinion seems to concede that neither the Dillon testimony nor these other factors, standing alone, would constitute substantial evidence and seems further to concede that the evidence from the Sun witnesses is unequivocal and clearly to the contrary. Two pieces of insubstantial evidence, added together, do not equal substantial evidence as required by the Wunderlich Act. It will be seen, as was intimated by the Senior Trial Judge, that the other evidence of delay factors cited by USL was clearly insubstantial and completely insufficient to support the final administrative determination that there was only 15 days of pre-contract delivery date delay per vessel.

The evidence of other delay factors must be viewed in proper perspective. There are really two questions involved. The first is as to how many additional days were needed for engineering and construction because of Changes 23 and 48. This is the issue to which the Sun witnesses and Mr. Dillon testified. As to this issue, the Senior Trial Judge found that there was no substantial evidence to support a figure as low as 60 days (15 pre-contract delivery date days) per vessel.

The second question views the problem indirectly. It assumes that the number of delay days has been determined and that, if the changes had not occurred, the vessels would have been delivered on a date determined by counting back from the actual delivery date the number of delay days. It then asks whether there were other, independent reasons why the new (theoretical) delivery dates could not have been met in any event.

As stated earlier in this Brief, the first USL vessel had a contract delivery date of September 29, 1964. Assuming that 75 days of pre-contract delivery date delay were caused by Changes 23 and 48, the assumed delivery date absent the changes would have been mid-July 1964. The question then is as to whether other delay factors would have, in any event, pushed that date back to September 14, 1964 (the 15 pre-contract delivery date delays allowed by the final administrative decision). These factors, listed in the Recommended Decision of the Hearing Examiner, whose opinion on this point was adopted by the Secretary of Commerce and which, therefore, became the decision that the Court of Claims had to establish was supported by substantial evidence, were:

(a) an addendum involving a single plane turbine engine;

(b) some alignment problems with an unconventional condenser arrangement;

(c) late engineering on the immediately preceding vessel, the Atlantic Heritage;

(d) 16 days of rain in April, 1964;

(e) diversion of manpower to repair work on the Cuyahoga (A201-02).

A review of the record demonstrates that these five factors, cited by the Hearing Examiner and by USL, taken individually or collectively, cannot push the assumed new delivery date back 60 days from mid-July 1964 to mid-September 1964, thus justifying the 15 days of pre-contract delivery date delay derived by the administrative decision.

Concerning the addendum to the engine, Mr. Zeien stated that, in his opinion, the addendum did not delay the delivery of these vessels at all (A250). Mr. Dillon testified that the addendum, if it delayed the vessels at all, delayed them at most two weeks (A221).

Regarding the alignment of the condenser, Mr. Snow, a USL witness, was unable, on cross-examination, to attribute any actual delay to this item. He admitted that, during the period alignment was going on, work was being done on both the quarters change and the automation change (A237). Surely miscellaneous testimony to the effect that "well we had trouble with this and we had trouble with that" without any attempt to quantify or to translate this into actual days of delay in delivery of the vessels cannot rise to the level of substantial evidence to chip away at clear evidence that the changes caused 120 days of delays on each vessel.

The evidence regarding the late engineering on the immediately preceding vessel, the Atlantic Heritage, was equally flimsy and was never tied down to any actual delay in delivery of the USL vessels. All that Mr. Snow, USL's witness, knew was that, as of March 1, 1963, the Atlantic Heritage engineering was behind schedule. He did not know how much it was behind schedule or even whether it was still behind schedule as of March 2, 1963 (A237-38). Of course, the relevant question was not whether some other vessel was behind schedule by an indefinite amount at one point in time but whether this fact had a direct impact on the USL vessels and the amount of that impact. Mr. McGowan, a MarAd witness, testified to this impact: "I don't concern myself with the Atlantic Heritage. I don't think it had a thing to do with it . . . ." (A233-34).

The ludicrous nature of the inclusion of 16 days of rain in April 1964 as a delay factor is highlighted by the

exchange between Sun and USL in briefs filed before the Senior Trial Judge. In its reply brief, Sun pointed out that even Mr. Young, USL's own witness, only attributed five days' delay, maximum, to heavy rain. USL replied:

> It is clear that the Examiner was simply cataloging the various non-change related delay facts at page 94 of the Recommended Decision when he referred to the 16 rain days in April, 1964 and was not, by that reference, deducting 16 days from SUN's early delivery claim.

Thus even USL admits the insignificance and lack of relevance of this line of disconnected and imprecise evidence.

The same deficiency infects the fifth cited delay factor —a short-term crane casualty. Mr. Young, a USL witness, testified that the USL hull being worked on when the casualty occurred (and he did not know the exact date of the occurrence) was not far enough along in construction at the time to require the continuous use of both cranes on the way in any event and that, as of the end of this month, all of the hulls were proceeding at a satisfactory rate (A241-45).

The final cited delay factor was diversion of manpower to repair work on the Cuyahoga. This work did not occur until the summer of 1964 (A218-20). By this time, absent the delay due to Changes 23 and 48, work on the USL vessels would not only have been substantially completed, but also the first hull would have been delivered! Moreover, the repair work done to the Cuyahoga primarily required the employment of steelworkers, and it was the steel work on the job that took longer than Sun had anticipated. But it was not steel work which was critical at this state of the USL job (even as it actually existed). The USL vessels were past this stage, and electrical work was the critical item for them. Thus the work

on the Cuyahoga did not delay the delivery of the USL vessels at all (A218-20).

It can thus be seen that, if the Court of Claims had undertaken a review of this purported evidence of other delay factors, it would have confirmed that this evidence, which was directed at a theoretical and indirect proposition to start with, never was connected up with the relevant issue—did these factors suffice to contradict the only substantial direct evidence as to the amount of delay caused by Changes 23 and 48, *i.e.*, 120 days per vessel? And, if so, how many delay days did each such factor account for? The "evidence" described above does not tie in at all to actual delay of the USL vessels, and it certainly does not quantify such delay, let alone to the extent of 60 days per vessel. When measured by the less demanding yardstick of relevance, this evidence fails.

We are, therefore, left with a situation where the insubstantial testimony of Mr. Dillon, when added to the insubstantial evidence of other delay factors, equals a record devoid of substantial evidence sufficient to support a final administrative finding of *only* 15 pre-contract delivery date delay days per vessel. This is not the substantial evidence required by the Wunderlich Act. In crediting the Department's position, the Court of Claims did not take into account the evidence of record which so totally undermined the Department's decision.

b. Similarly, the Decision of the Court of Claims Holding That the Denial of "Hire-Fire" Costs Is Supported by Substantial Evidence Demonstrates a Serious Misapplication of the Wunderlich Act Standard.

Massive changes, the size of Changes 23 and 48, severely delayed and disrupted the work force at the shipyard

(A222-28). Because of the delay caused by the changes, the first USL vessel was not launched on the scheduled date of February 28, 1964, but rather two and one-half months later on May 13, 1964 (A110, A228-29). If this first vessel had been ready for launch on February 28, 1964, outfitters could have been transferred to it from the last non-USL vessel, the ATLANTIC HERITAGE, which was delivered on December 17, 1963, since some outfitting work can be done prior to launch (A180). Because this vessel was not ready for launch until May, these men had to be laid off and either rehired later or new men hired to replace them. Through this hire-fire process, there was a loss of experience by these workers. Sun originally contended that changes 23 and 48 caused the layoff of 1241 men between August 1963 and May 1964. However, in briefing the point before the Chief Hearing Examiner, Sun reduced its claim to the layoff of 1130 men between September 1963 and February 1964 for a total cost of $435,000. The Hearing Examiner found that the effect of the changes was limited to 669 men at a cost of $236,222 (A178-81). The Board rejected this claim in its entirety and found, on the basis of the record created before the Hearing Examiner, that delay in the launching of the first USL vessel due to changes 23 and 48 was "insignificant." (A111). Sun challenged this finding in this Court but accepted for the purposes of appeal the Chief Hearing Examiner's limitation of causally related hire-fire costs to the three-month period of December 1963 to February 1964. The Trial Judge found that the Board's finding, affirmed by the Secretary of Commerce, which reversed the finding of the Chief Hearing Examiner, was not based on substantial evidence (A21-22). The Court of Claims, however, rejected the Trial Judge's conclusion (A2-4).

There is no dispute as to the fact that 669 men were laid off between December 1963 and February 1964, nor did the Board reject the Chief Examiner's finding that

these men would not have been laid off if the first USL vessel had been launched as scheduled on February 28, 1964. The only dispute before the Court of Claims was whether there was any evidentiary basis for the Board to reverse the Chief Examiner and to find that *no significant part* of the 75 days delay in launching the first USL vessel was caused by Changes 23 and 48. It will be seen that the conclusion that Changes 23 and 48 caused all of this delay is compelled by the overwhelming weight of the evidence as set forth in the preceding section and that any contrary conclusion is singularly lacking in evidentiary support.

The arguments of the Government and USL constitute attempts to pick away at bits and pieces of the evidence, utilizing rubrics having no application to the case at bar. It is asserted that Sun had the burden to prove the causal relationship between Changes 23 and 48 and the hire-fire costs. Sun accepted this burden and produced its chief officers, who testified, without qualification, that the outfitters were laid off because the USL vessels were not ready to receive them and that the USL vessels were not ready to receive them because of Changes 23 and 48 (A217-18, A228-30). No other witness testified that the USL vessels were not ready to receive the outfitters because of some other reason. Thus, having no evidence to create a dispute of fact, the Government and USL attempted to chip at this uncontradicted evidence. The Government and USL proceeded to attack the credibility of Messrs. Atkinson and Galloway. But did the Board attack or question the credibility of these witnesses? A review of its opinion will reveal that it did not. And it is only logical that the Board would not rest its reversal of the Chief Hearing Examiner on the credibility of witnesses who testified before the Examiner not the Board.

Next USL and the Government attempted to pick away at the Atkinson and Galloway testimony with the amorphous assertion that this was merely "opinion" testimony. In this regard, Mr. Galloway is criticized for not detailing the precise number of men who were laid off. A lack of knowledge as to such details certainly does not bring into question his qualification for testifying, as an officer of the company, as to the reason why it was necessary to lay-off a large number of men. The facts underlying this necessity were certainly something that the officers of the company examined in great detail. As Mr. Atkinson, Sun's President, testified:

> Well, layoffs are one of the unpleasant events that occur in shipyards and it is extremely unfortunate for the shipyard that layoffs of this kind did occur, particularly at the season of the year. It's awfully hard to explain to people that somebody had to change the quarters on a ship and their husband is going to be laid off before Christmas. This is a most difficult situation (A218).

To hold that these gentlemen were not qualified to testify as to why these layoffs occurred or that their testimony was conclusory or summary, as the Court of Claims did (A3), because they were not knowledgeable as to the exact number of men laid off, how long they were laid off, etc., was baseless.

Finally, it must be pointed out that the testimony of Sun's officers was not in a vacuum. The whole focus of this case, of which hire-fire was only a minor part, was whether Changes 23 and 48 had delayed these vessels and by how much. Not only was the evidence that such delay had occurred overwhelming but also even the Board found that all of the delay between the contract delivery dates

and the actual delivery dates—232 days or approximately 46 days per vessel—were caused by Changes 23 and 48. So we are left with a situation where the very administrative decision under attack has found that each of these USL vessels was delayed 45 days by Changes 23 and 48. It is against this background that Messrs. Atkinson and Galloway testified that the first USL vessel was not ready to receive outfitters upon the delivery of the Atlantic Heritage because of Changes 23 and 48.

If the Board did not attack or discredit the uncontradicted evidence that the first USL vessel was not ready to receive outfitters because of Changes 23 and 48, what was the basis for its reversal of the Chief Hearing Examiner? The answer is that it pulled out of the record certain isolated evidence indicating undefined delays and some evidence not even indicating delay at all and attempted to relate that evidence to the delay in the launching of the first USL vessel. It then reasoned that *substantially all* of the delay from February 28, 1964 to May 13, 1964 was due to these other factors. It will be seen that the cited evidence simply cannot support such a conclusion. In fact, this reasoning was so strained that, as pointed out in the Opinion of the Trial Judge (A21), the Government and USL ignored it in their Briefs submitted to the Trial Judge.

The Board premised its evaluation of this other evidence by stating that "we are not persuaded that delay in that construction scheduled was caused by the changes rather than by events for which Sun was responsible." (A109-10).

The first such "event" cited by the Board was the interchange of Hulls 628 and 629, the first two USL vessels. As admitted by the Board, the interchange was for the purpose of speeding up construction by taking advantage of the larger crane facilities at the way where

Hull 629 was being constructed (A110). The Board then recites that, from the standpoint of cumulative man-hours per hull, Hull 629 surpassed Hull 628 "around" January 1964 and, "from certain other standpoints, such as percentage of erection completed, Hull 629 surpassed Hull 628 somewhat sooner in November 1963." From this point, the Board takes a huge inductive leap:

> It follows that it was several months thereafter from either standpoint before Hull 629 reached the vessel percentage completion that Hull 628 would have had but for the interchange of hulls (A110-111).

Although up to this point the Board had cited supporting evidence, no evidence is cited for this bold conclusion. How does the Board know where Hull 628 would have been had it remained first? On what basis does it assume that the interchange did not achieve its purpose of speeding up construction? On what basis does it conclude that it was "several months" after November 1963 before Hull 629 was where 628 would have been rather than one month, when outfitters were ready to transfer from the Atlantic Heritage? Finally, this decision to interchange was made *after* and in light of the changes ordered by USL and the Government. Obviously this switch would not have been ordered if it would have had the effect of pushing back a launch date and necessitating the layoff of hundreds of men. Yet, in the absence of any evidence to support its conclusion, the Board opined that this was "the principal cause of delay in the construction schedule plan for a February 1964 launch . . . ." (A111). Astoundingly, the Court of Claims adopted this flimsy logic.

As a throw-in, the Board also made reference to "certain other delay factors" which had previously been cited, mentioning "work resulting from the single engine ad-

dendum signed on February 25, 1963, and the lateness in preparation of plans for an Atlantic Refining tanker delaying engineering on the USL vessels." (A111).

Thus the Board picked out isolated facts and drew the unwarranted conclusion that they proved delay and the Court of Claims upgraded this to "substantial evidence." There was no evidence tying these items to delay in the launch of the first USL vessel. Neither these facts nor the inferences which the Board sought to draw from them were even used to cross-examine the witnesses who did testify as to what caused the delay in launch.

The most conclusive evidence of the lack of logic in the Board's approach is its complete lack of consistency with other aspects of the final administrative decision. As mentioned above, the final administrative holding was that delivery of each of the USL vessels was delayed by approximately 61 days by Changes 23 and 48. If any delay in the launch of the first vessel caused by these changes was "insignificant," this would mean that all 61 days of the delay in delivery due to the changes occurred after launch (A111). But this is inconsistent with the Board's finding elsewhere in its opinion that both pre-launch and post-launch work were affected by the delay (A81-82). This also would mean that there was a total of 136 days delay on the first USL vessel: 61 days due to Changes 23 and 48 (all after launch) and 75 days pre-launch delay due to other factors. Working back from the actual delivery date of November 12, 1964, this would mean that, but for the changes and the other cited factors, the first USL vessel would have been delivered in June 1964—even before Sun had scheduled its delivery!

In short, to conclude that the launching of the first USL vessel was 75 days late because Sun (knowing this effect would result?) interchanged the first two hulls in August 1963, in the absence of any testimony that this

interchange did have this effect, and on the sole basis that Hull 629 did not exceed Hull 628 in total manhours until "around" January 1964 is insupportable. When this is coupled with the clear evidence, on which much of the remainder of the administrative decision is based, that Changes 23 and 48 substantially delayed these vessels, including pre-launch delay, the finding is completely irrational. Again, in affirming the decision of the Department of Commerce, the Court of Claims has seriously misapplied the substantial evidence requirement.

CONCLUSION.

In three separate areas, Sun has been denied compensation for costs it necessarily incurred in carrying-out changes dictated by the United States and the United States Lines. Throughout the protracted proceedings, only Sun has proceeded substantial evidence demonstrating the cost of the change. Nonetheless, the Department of Commerce incorrectly denied Sun compensation. In the Court of Claims, this error was compounded. As the preceding discussion has illustrated, the Court of Claims, in affirming the decision of the Department of Commerce, seriously misconstrued the Wunderlich Act's substantial evidence requirement. Unless this matter is remanded to the Court of Claims to re-examine the evidence under more appropriate standards, Sun will be deprived of sums to which it is entitled, and the substantial evidence requirement of the Wunderlich Act will be reduced to a requirement that "some evidence be it contradicted or theoretical" will support an administrative determination.

Respectfully submitted,

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Sun Shipbuilding & Dry
Dock Company.

IN THE

Supreme Court of the United States

October Term, 1976.

No. 76-284

SUN SHIPBUILDING & DRY DOCK CO.,
Petitioner,

v.

THE UNITED STATES,
Respondent.

APPENDIX TO PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF CLAIMS.

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INDEX TO APPENDIX.

Appendix.

Section One, Wunderlich Act, 41 U. S. C. 321.

No provision of any contract entered into by the United States, relating to the finality or conclusiveness of any decision of the head of any department or agency or his duly authorized representative or board in a dispute involving a question arising under such contract, shall be pleaded in any suit now filed or to be filed as limiting judicial review of any such decision to cases where fraud by such official or his said representative or board is alleged: *Provided, however,* That any such decision shall be final and conclusive unless the same is fra[u]dulent or capricious or arbitrary or so grossly erroneous as necessarily to imply bad faith, or is not supported by substantial evidence.

IN THE

United States Court of Claims.

—

No. 61-73.

—

SUN SHIPBUILDING & DRY DOCK CO.

v.

THE UNITED STATES.

—

Before DAVIS, *Judge*, Presiding, LARAMORE, *Senior Judge*, and KASHIWA, *Judge*.

———

ORDER.

This case comes before the court on the three parties' (plaintiff, defendant, third-party United States Lines) requests for review of the recommended decision of Trial Judge Mastin G. White, filed October 14, 1975, with respect to the parties' cross motions for summary judgment on Count II of the petition which is governed by the Wunderlich Act. Oral argument has been had and the briefs have been considered.

The court agrees with the Trial Judge's opinion (copies of which have been furnished to the parties) and adopts that opinion as the basis for its judgment, except for the so-called "Hire-Fire Costs" issue.

On that question the court does not agree with and does not accept the Trial Judge's opinion and conclusion, but determines instead that the final refusal of the Department of Commerce to grant "hire-fire costs" was not arbitrary, capricious, or unsupported by substantial evidence. The Trial Judge relied mainly on the testimony of Sun's high officials to the effect that Sun had contemplated using the laid-off outfitting men on the first United States Lines vessel, that it was the delay in launching of the first ship to be constructed under this contract which made it necessary for Sun to lay off these outfitting personnel in late December of 1963 and January and February of 1964, and that such delay was due to the disruption caused by the issuance of Change Orders 23 and 48. We conclude, on the other hand, that the Board and the Secretary of Commerce could permissibly find this conclusory and summary testimony outweighed by (1) the inability of Sun's Manager of Industrial Relations, who was supposed to support with detail the conclusions of the high officials, to tie the lay-offs specifically to Changes 23 and 48; (2) the fact that under its own original schedule Sun had anticipated a long delay (so long as to make it unlikely that it would have retained the workers in question) between the launching of the next previous vessel (the Atlantic Heritage) and the first of the five ships involved in the present contract; and (3) other simultaneous delay factors (including the interchange of the first two hulls), not attributable to Changes 23 and 48, for which Sun was itself responsible, and which would have made it improbable that the first United States Lines vessel would have been ready in time to receive the laid-off outfitting personnel from the Atlantic Heritage.

This disposition makes it unnecessary under the court's *en banc* order of May 31, 1974, to consider the arguments made by the United States Lines and the *amicus* as to the bearing on this case of *United States v. Rice*, 317 U. S. 61 (1940), and *United States v. Blair*, 321 U. S. 730 (1942), and the problem of so-called "delay

damages." Since we affirm the administrative award without adding to it, there are no possible offsets available in this court to the United States Lines; therefore we need not reach (and we take no position on) those issues.

IT IS THEREFORE ORDERED AND CONCLUDED that the determination of the Secretary of Commerce, insofar as properly challenged by the parties, was neither arbitrary, capricious, unsupported by substantial evidence, nor legally erroneous, and accordingly that the summary judgment motions of the defendant and the third party are granted, the plaintiff's motion is denied, and Count II of the petition is dismissed.

By THE COURT

OSCAR H. DAVIS
Judge, Presiding

MAY 28, 1976

IN THE
UNITED STATES COURT OF CLAIMS
TRIAL DIVISION

—

No. 61-73

—

(Filed October 14, 1975)

—

SUN SHIPBUILDING & DRY DOCK CO.

v.

THE UNITED STATES

—

ON PLAINTIFF'S MOTION, DEFENDANT'S CROSS-MOTION, AND THIRD-PARTY'S CROSS-MOTION FOR SUMMARY JUDGMENT

—

John J. Runzer, attorney of record for plaintiff. *Pepper, Hamilton & Scheetz*, of counsel.

Edward J. Friedlander, with whom was *Acting Assistant Attorney General Irving Jaffe*, for defendant. *James F. Ford*, of counsel.

Russell T. Weil, attorney of record for third party, United States Lines, Inc. *James P. Moore* and *Kirlin, Campbell & Keating*, of counsel.

Robert T. Basseches, attorney for *amicus curiae*, The Liner Council, American Institute of Merchant Shipping. *Anthony A. Lapham* and *Shea & Gardner*, of counsel.

OPINION.*

WHITE, *Senior Trial Judge:* The court has the task in this case of reviewing, pursuant to the standards prescribed in the Wunderlich Act (41 U. S. C. §§ 321, 322), administrative determinations that were made on certain aspects of a claim for additional compensation which Sun Shipbuilding & Dry Dock Company ("Sun") submitted under Contract No. MA/MSB-11 ("the contract").

The contract was a tripartite agreement that was entered into on October 10, 1962, by the United States (acting through the Maritime Subsidy Board), by United States Lines Company ("USL"), and by Sun. It obligated Sun to construct five single-screw cargo vessels in accordance with prescribed plans and specifications, and to deliver such vessels to USL on or before specified dates: *i.e.*, September 29, 1964, for the first vessel (Hull 628); December 13, 1964, for the second vessel (Hull 629); February 25, 1965, for the third vessel (Hull 630); May 12, 1965, for the fourth vessel (Hull 631); and July 26, 1965, for the fifth vessel (Hull 632). The contract obligated USL and the United States to pay the plaintiff the sum of $52,950,000 for constructing the five ships, of which sum USL was to pay 51.4 percent and the Government was to pay 48.6 percent as a construction-differential subsidy pursuant to section 501 *et seq.* of the Merchant Marine Act, 1936, as amended (46 U. S. C. § 1151 *et seq.*).

Under the original plans and specifications of the contract, the five cargo ships were to be constructed as conventional vessels.

On May 15, 1963, Sun laid the keel of Hull 628, the first of the five cargo vessels covered by the contract.

* The trial judge's recommended decision and conclusion of law are submitted in accordance with Rule 166(c). The necessary facts are stated in the opinion.

Then, on May 31, 1963, USL, with the approval of the Maritime Subsidy Board ("the Board"), issued Change Order 23, which changed certain of the prescribed plans so as to provide for the automation of the engine room in each of the five ships by enabling throttle control and certain other control functions to be performed directly from the bridge of the ship and by centralizing, in a large console located on the bridge, temperature readings and other data originating in the engine room.

Thereafter, as the automation of the engine room pursuant to Change Order 23 would reduce the size of the crew needed to operate each of the five vessels, Change Order 48 was issued on October 1, 1963, to change the plans for the crew quarters so as to rearrange and reduce the size of the quarters in each of the vessels. Still later, in February 1964, Change Order 48 was modified, and this made a further change in the plans for the crew quarters.

Sun constructed the five vessels in accordance with the contract, as changed, and delivered them to USL on the respective dates of November 12, 1964, January 15, 1965, April 14, 1965, June 29, 1965, and September 24, 1965. These delivery dates were 44, 33, 47, 48, and 60 days beyond the respective delivery dates specified in the contract for the five vessels.

ADMINISTRATIVE PROCEEDINGS.

As Sun and the representatives of the contracting officer involved in the administration of the contract were unable to agree on the amount of the additional compensation to which Sun was entitled because of the extra work occasioned by Change Orders 23 and 48, Sun submitted to the contracting officer a formal claim in the amount (as revised) of $5,218,516, plus a profit of 10 percent,

or a total of $5,740,368. The contracting officer's decision on the claim was rendered under the date of August 21, 1969. He concluded "that $2,200,000 including applicable profit represents fair and reasonable value for the work."

Both Sun and USL appealed to the Board from the contracting officer's decision. The appeals were referred by the Board to its Chief Hearing Examiner for the holding of a hearing and the preparation of a recommended decision. A lengthy hearing before the Chief Hearing Examiner was held during the period December 1, 1969-January 20, 1970. Sun and USL, and also staff counsel representing the Maritime Administration, participated in the proceedings before the Chief Hearing Examiner. During the course of such proceedings, Sun increased the amount of its claim, including profit, to $6,688,893. The Chief Hearing Examiner submitted a recommended decision under the date of June 1, 1970; and the recommended decision was supplemented in July 1970 by a recommended order, proposing that the sum of $3,820,120, including profit, be awarded to Sun.

Exceptions to the Chief Hearing Examiner's recommended decision and order were taken by Sun, by USL, and by staff counsel representing the Maritime Administration. The Board's decision on the exceptions was rendered on August 11, 1971; and this decision was supplemented by an order dated September 24, 1971. Under the Board's decision and order, Sun was awarded the sum of $2,798,882.35.

Sun, USL, and the American Institute of Merchant Shipping filed petitions with the Secretary of Commerce, asking that he review the Board's decision and order. The result of the Secretary's review was incorporated in an order dated January 20, 1972, which modified the Board's decision and order to the extent of awarding Sun the sum of $3,070,547.95.

The United States thereafter paid Sun on the basis of the former's 48.6 percent share of the $3,070,547.95 which the Secretary's order awarded Sun. However, USL did not accept the Secretary's determination as correct.

Prior Court Proceedings

Sun filed its petition in this court on February 14, 1973; and a first amended petition was filed on May 4, 1973.

On July 5, 1973, the United States filed a motion asking that a notice regarding the pendency of the litigation be issued to USL under Rule 41(a), so that USL would be afforded an opportunity to appear as a party and assert its interest (if any) in the action. The defendant's motion was allowed; the requested notice was issued and served on USL; and USL on September 25, 1973, filed a document which it denominated an "answer" to Sun's first amended petition.

The plaintiff's first amended petition contained two counts. Count I sought a judgment against the United States in the amount of $847,704.09 on the basis of an alleged breach of the contract by the Board. Count II of the first amended petition requested a review of the Secretary's order of January 20, 1972, under the provisions of the Wunderlich Act, and sought a determination by the court that the order should have awarded Sun an amount "in excess of" $7,000,000. If a proper award had been made, the amount due Sun from the Government under the award "would have exceeded" $3,500,000, according to Count II of the first amended petition.

On July 27, 1973, Sun filed a motion for summary judgment on count I of the first amended petition; and on October 2, 1973, the United States filed a cross-motion for summary judgment on count I. These motions were

disposed of by the court in an order dated May 31, 1974, which denied Sun's motion, granted the Government's cross-motion, dismissed count I from the first amended petition, and remanded the case to the trial judge for further proceedings relative to count II of the first amended petition. Sun subsequently petitioned the Supreme Court for a writ of certiorari, but the petition was denied by the Court (419 U. S. 1021 (1974)).

On January 6, 1975, Sun filed a motion for summary judgment on count II of the first amended petition. The United States and USL each filed a cross-motion for summary judgment on April 7, 1975.

Sun contends that the factual findings on three matters at the administrative level are not supported by substantial evidence, and, therefore, that they are not entitled to finality under Wunderlich Act standards.

The "Delay" Issue

One of Sun's contentions is that there is a lack of substantial evidence supporting the administrative determination concerning the extent of the delay in the delivery of the five cargo ships under the contract that was attributable to the issuance of Change Orders 23 and 48.

On this point, the Chief Hearing Examiner concluded in his recommended decision that, but for the issuance of Change Orders 23 and 48, Sun could have delivered each of the five vessels 15 days prior to the respective delivery dates specified in the contract; and, since the actual delivery dates for the five ships were a total of 232 days beyond the contract delivery dates, the issuance of Change Orders 23 and 48 thus caused 307 (75 plus 232) days of delay in the delivery of the five ships. The Board, in its consideration of this particular matter, concluded that only the 232-day period of delay subsequent

to the contract delivery dates was attributable to the issuance of Change Orders 23 and 48. Finally, the Secretary of Commerce, in his order of January 20, 1972, reinstated and adopted the Chief Hearing Examiner's recommended decision with reference to the extent of the delay that was attributable to the issuance of Change Orders 23 and 48.

Therefore, the administrative determination before the court for review on this aspect of the case is to the effect that the issuance of Change Orders 23 and 48 caused a total of 307 days of delay in the delivery of the five cargo vessels under the contract, with 75 days of the delay occurring prior to the contract delivery dates and 232 days of the delay occurring after the contract delivery dates.

In its brief supporting the motion for summary judgment on count II of the first amended petition, Sun contends that the evidence in the administrative record proves that, but for Change Orders 23 and 48, each of the five ships would have been delivered 75 days before the pertinent contract delivery date, instead of only 15 days before the contract delivery date, as determined by the Secretary of Commerce in adopting the recommended decision of the Chief Hearing Examiner on this point. It is thus Sun's contention that Change Orders 23 and 48 caused a total of 607 days of delay (375 days prior to the contract delivery dates and 232 days after the contract delivery dates) in the delivery of the five ships, instead of 307 days of delay, as determined by the Secretary of Commerce.

The United States, in the brief supporting the Government's cross-motion for summary judgment, asserts that the administrative determination on this issue—*i.e.*, that Change Orders 23 and 48 caused a total of 307 days of delay (75 davs prior to the contract delivery dates and

232 days after the contract delivery dates)—is based on substantial evidence and, therefore, is entitled to finality.

USL states in the brief supporting its cross-motion for summary judgment that it does not contest that portion of the administrative determination which attributed 232 days of delay to the issuance of Change Orders 23 and 48—*i.e.*, the delay that occurred after the contract delivery dates—but that the evidence in the administrative record does not support the part of the administrative determination which found that each of the five ships would have been delivered 15 days prior to the contract delivery date in the absence of Change Orders 23 and 48, and these change orders were thus responsible for 75 days of delay prior to the contract delivery dates for the five ships.

All portions of the administrative record cited by the parties in their briefs have been carefully considered in passing upon their respective contentions regarding the extent of the delay caused by the issuance of Change Orders 23 and 48, and also in passing upon their contentions relative to the other issues in the case. However, no independent examination of the entire administrative record (which is enormous) has been undertaken in a search for evidence bearing upon this—or any other—aspect of the case. Rule 163 places upon litigants in this type of case the obligation of citing with specificity the portions of the administrative record containing the evidence on which they rely as supporting or refuting an administrative finding that is submitted to the court for review. It must be assumed, as a practical matter in view of the large size of the present administrative record, that the parties in this case have fulfilled their obligations under Rule 163.

The evidence cited by Sun in its brief relative to the "delay" issue was to the effect that Sun's bid on the contract was based upon a plan to deliver the first ship in July 1964, the second ship in October 1964, the third ship in January 1965, the fourth ship in April 1965, and the fifth ship in July 1965; that in November 1962, Sun prepared and delivered to the Maritime Administration a written construction schedule which called for the delivery of the vessels in accordance with the plan just mentioned; that at the time of the preparation of the November 1962 schedule, Sun had sufficient manpower and sufficient physical facilities available to enable it to meet the scheduled delivery dates; that the keel of Hull 628 (the first vessel) was laid on May 15, 1963, which was 2 weeks ahead of the scheduled date of June 1, 1963, for the first keel laying; that if Change Orders 23 and 48 had not been issued, Sun would have been able to deliver the first vessel by mid-July of 1964 and the succeeding four vessels at intervals of 75 days each thereafter; that if Change Orders 23 and 48 had not been issued, none of the other developments which occurred during the construction program would have prevented such early deliveries; and that the extra work and the disruption of the construction schedule caused by Change Orders 23 and 48 were the only reasons why the first vessel was not delivered in mid-July of 1964, with deliveries of the other four vessels following at intervals of 75 days each.

As will be explained more fully later in the opinion, the Government cites the testimony of the witness Edward Scott Dillon in connection with the "delay" issue. Mr. Dillon testified as an expert witness; and he expressed the opinion that the first ship would have been delivered "somewhere between 30 and 0 days prior to contract delivery date had it not been for Changes 23 and 48," and that "under these circumstances, I would say 15 days prior to the delivery date."

The evidence summarized in the two immediately preceding paragraphs, if considered together and accepted as correct, would certainly be sufficient to establish that, but for the issuance of Change Orders 23 and 48, Sun would have been able to deliver each of the five ships *at least* 15 days prior to the contract delivery date and, therefore, that the issuance of these change orders caused *at least* 75 days of delay prior to the contract delivery dates for the five ships. It necessarily follows that the administrative record contains, in the form of the evidence cited and relied on by Sun and by the Government, the requisite "substantial" evidence needed under Wunderlich Act standards to support the administrative determination insofar as it finds, in effect, that Change Orders 23 and 48 caused *at least* 75 days of delay prior to the contract delivery dates for the five ships.

For the purpose of the Wunderlich Act, substantial evidence is "such evidence as might convince a reasonable man, to support the conclusion reached by the agency officials" (*T. C. Bateson Construction Co. v. United States,* 140 Ct. Cl. 514, 518 (1960)), or "evidence which could convince an unprejudiced mind of the truth of the facts to which the evidence is directed" (*Koppers Co. v. United States,* 186 Ct. Cl. 142, 149, 405 F. 2d 554, 558 (1968)). If the evidence cited and relied on by Sun and by the Government, as previously summarized, is considered together, it qualifies as substantial under these definitions and supports the administrative conclusion that the issuance of Change Orders 23 and 48 caused *at least* 75 days of delay prior to the contract delivery dates for the five ships.

It thus becomes unnecessary—and, indeed, it would be improper under Wunderlich Act standards—for the court at this point to evaluate the evidence cited by USL

in its brief as tending to show that delay factors other than Change Orders 23 and 48 would have prevented Sun from delivering the ships prior to the contract delivery dates, even if these change orders had not been issued. It is not the court's prerogative in a Wunderlich Act case to weigh conflicting evidence and make an independent determination on a factual issue, once it has been decided that the administrative determination is supported by evidence that can properly be characterized as substantial. *T. C. Bateson Construction Co. v. United States, supra,* 149 Ct. Cl. at 518.

Accordingly, the crucial question on the "delay" issue is whether there is substantial evidence in the administrative record supporting the administrative determination insofar as it finds, in effect, that even if Change Orders 23 and 48 had not been issued, Sun would have been able to deliver each of the five ships *only* 15 days prior to the contract delivery date and, therefore, that the issuance of these change orders caused *only* 75 days of delay prior to the contract delivery dates for the five ships.

The Government's initial brief did not cite any evidence as supporting the administrative determination that the issuance of Change Orders 23 and 48 caused only 75 days of delay prior to the contract delivery dates for the five ships. The Government's reply brief, however, states that the "testimony of Mr. Dillon" clearly supports the administrative finding on this point, and cites 42 pages of the transcript, containing the direct testimony of the witness Edward Scott Dillon. At the time of the hearing, Mr. Dillon was Deputy Chief, Office of Ship Construction, Maritime Administration.

It appears from an examination of the transcript pages cited by the Government that Mr. Dillon did not testify from personal knowledge of the facts pertaining to the present controversy. Indeed, it was not until June or July

of 1967 that he became involved in the controversy (the last of the five ships having been completed and delivered on September 24, 1965). He testified as an expert witness; and his testimony was based upon an examination of documents which were referred to generally as the "U. S. Lines submission" to the Maritime Administration and as the "discovery data" obtained by the Maritime Administration from Sun. The documents were not otherwise identified, with the exception of a graph depicting "man hours versus time" and a series of production analysis reports covering the period from January 4, 1963, through October 16, 1964. On the basis of the documents which he examined (most of them unidentified), Mr. Dillon expressed the opinion that the first ship would have been delivered "somewhere between 30 and 0 days prior to contract delivery date had it not been for Changes 23 and 48," and that "under these circumstances, I would say 15 days prior to the delivery date."

It was principally on the basis of Mr. Dillon's opinion testimony, as summarized in the preceding paragraph, that the Chief Hearing Examiner and the Secretary of Commerce concluded that even if Change Orders 23 and 48 had not been issued, each of the five ships would have been delivered only 15 days prior to the contract delivery date, and that these change orders thus caused only 75 days of delay prior to the contract delivery dates for the five ships. However, Mr. Dillon's opinion testimony, being based largely on undisclosed documents, could not, if standing alone, reasonably be regarded as "substantial" in the face of conflicting evidence from Sun's witnesses who were in charge of the construction of the five ships and testified from personal knowledge of the facts involved in the construction program.

On the other hand, USL's brief cites evidence of many delay factors which developed during the course of the

construction of the five ships and which were unrelated to Change Orders 23 and 48. Consideration of such evidence, in connection with the opinion testimony of Mr. Dillon, might convince "a reasonable man" or "an unprejudiced mind" that even if Change Orders 23 and 48 had not been issued, other delay factors would have prevented Sun from delivering each of the five ships at an earlier date than 15 days prior to the contract delivery date, and, therefore, that the issuance of Change Orders 23 and 48 did not cause more than 75 days of delay prior to the contract delivery dates for the five ships. Consequently, it must be concluded that the administrative determination to this effect is supported by "substantial" evidence, even though there is contrary evidence from Sun's witnesses in the record. As stated earlier in the opinion, the court is not permitted in a Wunderlich Act case to weigh conflicting evidence on a disputed question of fact, once it has been decided that the administrative determination on a particular point is supported by evidence that can properly be regarded as substantial.

It necessarily follows that Sun is not entitled to any recovery against the Government in the present litigation on the ground that, but for Change Orders 23 and 48, each of the five ships under the contract could have been completed and delivered more than 15 days prior to the contract delivery date. Accordingly, Sun's petition should be dismissed as to this aspect of the claim.

With the failure of this aspect of Sun's claim, it becomes unnecessary to discuss USL's contention that "delay associated damages" or "consequential costs" attributable to the issuance of Change Orders 23 and 48 cannot properly be assessed because of the so-called "Rice doctrine," derived from the Supreme Court's decision in the case of *United States v. Rice*, 317 U. S. 61 (1942).

THE "HIRE-FIRE COSTS" ISSUE

Sun argues that the administrative finding relative to the absence of a causal connection between Change Orders 23 and 48, on the one hand, and certain "hire-fire" costs involved in Sun's claim, on the other hand, is not supported by substantial evidence.

In the proceedings before the Chief Hearing Examiner, Sun contended that because of the delay occasioned by Change Orders 23 and 48, it had been compelled to lay off many workmen in the outfitting trades; that later, when the first ship under the contract was ready for outfitters to work on it, Sun in many instances had to employ less experienced workmen as replacements for those who had been laid off; and that Sun experienced a loss of efficiency and increased costs due to this situation.

The Chief Hearing Examiner found that 669 men were laid off by Sun during the latter part of December 1963 and the months of January and February 1964; that such layoffs were directly related to the construction delays caused by Change Orders 23 and 48; and that the award to Sun should include the sum of $236,222 because of the "hire-fire" costs growing out of Sun's loss of efficiency.

The Board's decision reversed the Chief Hearing Examiner's recommended decision on Sun's entitlement to "hire-fire" costs. The Board said that Sun had "failed to establish a causal connection between the changes [23 and 48] and the layoffs." The Secretary of Commerce, in his order of January 20, 1972, affirmed and adopted the Board's determination on this point.

The evidence in the administrative record shows, as found by the Chief Hearing Examiner, that 669 men were laid off by Sun during the period extending from the latter part of December 1963 through the months of January and February 1964. Sun's officials testified that these layoffs involved outfitting personnel; that Sun had intended to use such personnel in the outfitting work on the first vessel to be constructed under the contract, and would have done so if Sun had been able to carry out the scheduled launching of such vessel on February 28, 1964; that the layoffs of outfitting personnel became necessary because Sun was compelled to delay the launching of the first vessel under the contract from February 28, 1964, until May 13, 1964; and that such delay in the launching of the first vessel under the contract was attributable to the disruption occasioned by the issuance of Change Orders 23 and 48.

Neither the Government nor USL has cited any evidence in the administrative record which actually contradicts the testimony of Sun's officials to the effect that it was the delay in the launching of the first ship to be constructed under the contract which made it necessary for Sun to lay off outfitting personnel in late December of 1963 and January and February of 1964, and that such delay was due to the disruption caused by the issuance of Change Orders 23 and 48.

The Government cited evidence to the effect that Sun, in its previous construction schedules, had customarily maintained an interval of from 60 to 90 days between ship launchings; that such an interval permitted an orderly and efficient transfer of outfitting personnel from one ship to the next ship in the construction sequence; that in Sun's construction program for 1963-64, a ship known as the ATLANTIC HERITAGE was the one next preceding the first ship to be constructed under the contract; and that there was an interval of at least five months between the launching of the ATLANTIC HERITAGE and the date, February 28, 1964, on which Sun originally planned

to launch the first ship to be constructed under the contract. In addition, the Government cited evidence indicating that Sun's personnel records did not give any specific reason for the layoffs during the winter of 1963-64, other than lack of work.

However, the circumstance that there was a longer-than-usual interval between the launching of the ATLANTIC HERITAGE and the originally scheduled date for the launching of the first ship under the contract does not refute the evidence clearly showing that Sun retained outfitting personnel in its employ into the winter of 1963-64 (they presumably were working on the ATLANTIC HERITAGE until its completion and delivery in December 1963); that Sun intended to use such personnel on the first ship to be constructed under the contract, and would have done so if that ship had been launched at the time originally planned; that it became necessary to lay off the outfitting personnel when the launching of the first ship under the contract was delayed from February until May of 1964; and that such delay was due to the disruption caused by Change Orders 23 and 48. Also, the circumstance that Sun's personnel records merely indicated lack of work as the reason for the layoffs does not refute the testimony of Sun's officials that the lack of work for outfitting personnel developed because of the delay in the launching of the first ship under the contract, which, in turn, was caused by the disruption resulting from the issuance of Change Orders 23 and 48.

USL criticized Sun's evidence concerning the relationship between Change Orders 23 and 48, on the one hand, and the layoffs during the winter of 1963-64, on the other hand. USL did not, however, cite any negating evidence. USL's brief did refer in a footnote to "Other delay factors (unrelated to changes 23 and 48) which

were found to have delayed the launching of USL's first hull beyond the end of February 1964," and listed five such purported delay factors, but did not cite any evidence as furnishing the facts concerning these matters. This reference did not conform to the specificity requirement imposed on parties by Rule 163.

When the evidence cited by the parties in their briefs on the "hire-fire costs" issue is considered, it must be concluded that the administrative determination by the Board and the Secretary of Commerce regarding the lack of a causal connection between Change Orders 23 and 48, on the one hand, and Sun's layoffs during the winter of 1963-64, on the other hand, is not supported by evidence sufficient to convince "a reasonable man" or "an unprejudiced mind," and, therefore, that such administrative determination is not entitled to finality under Wunderlich Act standards. On the contrary, the only reasonable conclusion to be reached, on the basis of the cited evidence, is that there was such a causal connection, as found by the Chief Hearing Examiner. Therefore, the existence of the causal connection can properly be determined by the court, without remanding the case to the Department of Commerce for further administrative proceedings on this point. *Maxwell Dynamometer Co. v. United States,* 181 Ct. Cl. 607, 631, 386 F. 2d 855, 870 (1967).

The Chief Hearing Examiner's finding as to the amount of the extra "hire-fire" costs incurred by Sun—$236,222—has not been challenged by any of the parties. Accordingly, Sun is entitled to recover an amount representing 48.6 percent of $236,222, or $114,803.89, in the present suit against the United States.

It may be noted that we are not dealing here with an alleged failure by the Government to take affirmative action in aid of Sun's efforts to accomplish an early launch-

ing of the first ship under the contract in order to complete and deliver the five ships prior to the contract delivery dates. *Cf. United States v. Blair,* 321 U. S. 730, 733 (1944). Rather, we are dealing with actions which the Government took and which adversely affected Sun's efforts to accomplish an early launching of the first ship, thus necessitating layoffs of outfitting personnel.

The extra "hire-fire" costs are recoverable because they were "the direct and necessary result" of Change Orders 23 and 48, in a situation where such changes "directly * * * [led] to disruption, extra work, or new procedures." *Paul Hardeman, Inc. v. United States,* 186 Ct. Cl. 743, 752, 406 F. 2d 1357, 1363 (1969; concurring opinion of Judge Davis).

THE "NORMAL HULL PRODUCTION RATE" ISSUE.

Sun contends that there is a lack of substantial evidence supporting the administrative determination to the effect that six hulls represented the normal capacity of Sun's yard to work on new-hull construction, and Sun objects to the use of this figure in calculating the amount due Sun as reimbursement for unabsorbed overhead costs that continued during the period of delay attributable to Change Orders 23 and 48.

In his recommended decision, the Chief Hearing Examiner said that the unabsorbed overhead costs incurred during the period of delay attributable to Change Orders 23 and 48 should be determined upon the basis of a formula containing these "four basic elements":

> 1. Continuing overhead attributable to non-hull production is subtracted from the total continuing overhead for the entire yard producing continuing overhead attributable to new hull production.

> 2. The latter is divided by the number of new hulls normally produced per year × 365 days producing continuing overhead (new hull)/vessel days.
>
> 3. This figure is multiplied by the vessel days delay due to changes to produce the continuing overhead due to change caused delay.
>
> 4. The continuing overhead absorbed by Sun's hardware claim is subtracted from this result to produce the continuing overhead recoverable as a cost under the contract changes clause.

The Chief Hearing Examiner made a factual finding to the effect that Sun had "a normal hull production of 4.8 vessels per year," or "a rounded off five hulls per year normal new construction experience"; as stated previously in this opinion, the Chief Hearing Examiner found as a fact that Change Orders 23 and 48 were responsible for a total of 307 days of delay in the delivery of the five ships under the contract. On the basis of the formula and his factual findings, the Chief Hearing Examiner recommended that Sun be awarded $529,000 for unabsorbed overhead costs.

In reviewing the Chief Hearing Examiner's recommended decision on this point, the Board approved the formula that had been used by the Chief Hearing Examiner. The Board said, however, that it was not "fair and reasonable that USL and MarAd [Maritime Administration] should be subjected to the vicissitudes of Sun's past experiences," and that "A fairer and more reasonable measure is the use of a normal capacity rate which may or may not be greater or less than the historically based production rate." The Board then made a factual finding that six hulls represented the normal capacity of Sun's yard to work on new-hull construction. Also, as pre-

viously stated, the Board made a factual finding that 232 days of delay (rather than 307 days, as determined by the Chief Hearing Examiner) were attributable to Change Orders 23 and 48. On the basis of these factual determinations and the formula previously mentioned, the Board awarded Sun the sum of $232,172.45 for unabsorbed overhead costs.

In the final administrative decision on the matter now under consideration, the Secretary of Commerce affirmed the Board's position that the normal capacity of Sun's yard to work on new-hull production, rather than Sun's historical experience in the actual production of hulls, should be used in the formula for determining unabsorbed overhead costs; and the Secretary also affirmed the Board's factual finding that six hulls represented Sun's normal yard capacity. However, the Secretary rejected the Board's factual finding that Change Orders 23 and 48 were responsible for only 232 days of delay in the delivery of the five ships, and instead reinstated and adopted the Chief Hearing Examiner's factual finding that Change Orders 23 and 48 were responsible for 307 days of delay. On the basis of the pertinent formula and his factual determinations, the Secretary awarded Sun $384,024.03 for unabsorbed overhead costs.

The final administrative determination that six hulls represented the normal capacity of Sun's yard to work on new-hull construction was based on a tabulation which was prepared and introduced into evidence by representatives of USL, and which purported to show the operations in Sun's yard during a certain period of time. Sun's principal contention on this aspect of the case is, in effect, that the Board and the Secretary of Commerce should not have relied on USL's tabulation, because it included hulls that were not new hulls but old vessels which were being repaired in Sun's yard, it included hulls that were small

barges, and it included hulls that were being delayed by reason of extensive changes. However, Sun's argument calls for a weighing of the evidence that was before the Board and the Secretary, and for a rejection of USL's tabulation on the basis of other evidence presented by Sun. As stated elsewhere in this opinion, the Court of Claims is not vested with authority to weigh evidence in a Wunderlich Act case, so long as there is substantial evidence supporting an administrative determination; and the USL tabulation qualifies as substantial evidence on the "normal hull production rate" issue.

Therefore, Sun's petition should be dismissed as to this aspect of the case.

Conclusion.

The plaintiff's motion for summary judgment is allowed, and the cross-motions for summary judgment are denied, insofar as the motions relate to the portion of the plaintiff's claim which seeks reimbursement for extra "hire-fire" costs, and it is adjudged and ordered that the plaintiff recover of and from the United States the sum of one hundred fourteen thousand eight hundred three dollars and eighty-nine cents ($114,803.89) on this aspect of the plaintiff's claim. Otherwise, the plaintiff's motion for summary judgment is denied, the cross-motions for summary judgment are allowed, and the petition is dismissed as to other aspects of the plaintiff's claim.

THE SECRETARY OF COMMERCE
WASHINGTON, D.C. 20230

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ORDER.

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In the Matter of: Compensation for Changed Work under Contracts for Construction of Five Ships, MSB Dockets Nos. CA-62 and CA-63.

The petitions of United States Lines, Sun Shipbuilding & Dry Dock Company, and American Institute of Merchant Shipping for review of the Maritime Subsidy Board decision in the above-entitled matter have been considered, and I have determined to modify that decision for the reasons and in the manner hereinafter indicated:

The departmental regulations governing Secretarial review provide that such review ". . . will not be granted unless significant and important questions of over-all policy requiring the Secretary's attention are involved or factual error in the Board's action." Accordingly Secretarial review of contract dispute determinations should be and is regularly denied because they usually involve considerations of a technical nature pertaining to ship construction or operation.

However, in this case with respect to certain items in dispute, the shipbuilder particularly protests that the Board's determinations differ from those recommended by the Board's representative who conducted the required proceedings for the presentation of evidence. In effect thereby a policy question has been raised as to the extent

to which the Board should be influenced by the examiner's recommendations.

It is my view with respect to a few of these claims which are not easily susceptible to mathematical or other precise calculation that the Board should not have departed from the examiner's findings for which there was substantial factual support. I recognize that in each of these instances the Board has set forth good reasons for its differing views but I am not persuaded under the particular circumstances that reversal of the examiner's conclusions is warranted. I have concluded, therefore, that the claim items relating to the extent of pre-contract delivery date delay, the estimated number of service hours per month during the delay period, and the estimates of disruption effect in terms of production and congestion, should be disposed of in accordance with the examiner's views. In all other respects, I affirm the Board's decision including the several other instances in which it departed from the examiner's recommendations.

I would further state that this decision and the reasons therefore relate only to contract dispute cases and not to any other matters coming before the Board and its examiners in the administration of the merchant marine program.

Pursuant to this decision petitioner, Sun Shipbuilding & Dry Dock Company, is entitled to award in the amount of $3,070,547.95, as follows:

Hardware Costs	$1,966,307.47
Delay Associated Costs	
Insurance	15,378.00
Labor Escalation	54,185.00
Services	106,888.73
Unabsorbed Overhead	384,024.03
Overtime	80,800.00
Engineering Disruption	58,824.00
Production Disruption and Congestion	125,000.00
	825,099.76
Sub-Total	2,791,407.23
10% Profit	279,140.72
TOTAL	$3,070,547.95

SO ORDERED

MAURICE H. STANS
Maurice H. Stans
Secretary of Commerce

Date: January 20, 1972

THE SECRETARY OF COMMERCE
WASHINGTON, D.C. 20230

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ORDER.

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In the Matter of: Petitions for Reconsideration of the Secretarial Order dated January 20, 1972, regarding compensation for changed work under contracts for construction of five ships, MSB Dockets Nos. CA-62 and CA-63.

The petitions of United States Lines, Inc (USL), dated February 7, 1972, and the Liner Council, American Institute of Merchant Shipping (AIMS), dated February 8, 1972, for reconsideration of the Order of the Secretary in the above-entitled matter have been reviewed.

Both petitioners complain that the Order does not expressly treat with the legal issue between the petitioners and the Sun Shipbuilding & Dry Dock Company (Sun) concerning the allowability only of the direct cost of changed work as distinguished from disruption or delay costs. USL's petition for reconsideration similarly refers to the separate legal issue whether the contractual requirement for a shipbuilder to furnish preliminary estimates of the cost of proposed changes precludes the ultimate recovery of additional costs.

Both of these legal issues among several others were set forth at considerable length by AIMS and USL in their original petitions for Secretarial review as well as in the challenged decision of the Maritime Subsidy Board. In my Order I stated that I had considered such petitions and had concluded to modify the Board's decision only as it related to three specified claim items, and went on to say:

". . . In all other respects, I affirm the Board's decision including the several other instances in which it departed from the examiner's recommendations."

I have not overlooked the further statement in the AIMS petition for reconsideration to the effect that my Order contained only a partial quotation from the regulations concerning the scope of Secretarial review and that the omissions possibly reflected an intention to limit such review contrary to the regulations. I would, therefore, now affirm that such was not my intention, that in fact the petitions were considered in their entirety, and that except as related to the three claim items, I intended and did uphold the Board's decision as indicated above, "In all other respects, . . ."

So Ordered

Maurice H. Stans
Maurice H. Stans
Secretary of Commerce

Date: February 15, 1972

Department of Commerce
Maritime Administration
Maritime Subsidy Board

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Docket Nos. CA-62 and CA-63

SUN SHIPBUILDING AND DRY DOCK COMPANY

v.

U. S. LINES, INC.

In the matter of cross appeals from a decision of the Contracting Officer concerning the fair and reasonable value of work performed by Sun Shipbuilding and Dry Dock Company pursuant to Changes Nos. 23 (centralized control of engine room and bridge control of main engine) and 48 (modification of crew accommodations) on five C4-S-64a design type vessels constructed for United States Lines, Inc. under Contract No. MA/MSB-11.

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Submitted: April 5, 1971 Decided: August 11, 1971

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FINAL OPINION AND ORDER OF THE MARITIME SUBSIDY BOARD.

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Andrew E. Gibson, Chairman; Robert J. Blackwell, Member; and Roy G. Bowman, Alternate Member

Served Upon:

John J. Runzer, Esq., c/o Pepper, Hamilton and Scheetz, 123 South Broad Street, Philadelphia, Pennsylvania 19101 for Sun Shipbuilding and Dry Dock Company

Louis J. Cusmano, Esq., William J. O'Brien, Esq., and *John P. Geraghty, Esq.*, c/o Kirlin, Campbell & Keating, 120 Broadway, New York, New York for United States Lines, Inc.

Robert A. Garske, Esq., Staff Counsel, Maritime Administration, Washington, D. C.

INTRODUCTION.

This proceeding before the Maritime Subsidy Board ("Board") involves cross appeals by Sun Shipbuilding and Dry Dock Company ("Sun") and United States Lines, Inc. ("USL") pursuant to the disputes provision, Article 36, of the General Provisions of Contract No. MA/MSB-11 (the "Contract") from a final decision by the Acting Chief, Office of Ship Construction ("Contracting Officer"), Maritime Administration. That final decision held that the fair and reasonable value of the work Sun was entitled to recover for performing work in accordance with Changes Nos. 23 and 48 on five C4-S-64a design type cargo vessels constructed for USL amounted to $2,200,000 including profit. The cross appeals from that decision were referred to the Chief Hearing Examiner (and thereby the authorized Representative of the Board) for hearing and recommended decision. The Maritime Administration ("MarAd"), represented by Staff Counsel, has also been a party to this proceeding since the Board has authorized subsidy participation in these changes at the construction-differential subsidy ("CDS") rate of 48.6%. The proceeding is presently before the Board upon certification of the record by the Board's Representative on October 2, 1970.

This dispute essentially concerns the cost of automating these five vessels of USL, which were among the first United States-flag automated cargo vessels. Initially, under the Contract signed on October 10, 1962, for $52,950,000 these vessels were designed to be constructed as conventional vessels. Addendum No. 1 to the Contract, however, executed on February 25, 1963, increased the maximum-continuous shaft horsepower from 16,000 to 18,000, changed the engine configuration to single plane, and increased the contract price to $53,199,000. Actual automation of these vessels was directed by Change 23 which the Board approved on May 31, 1963, "based on an estimate of $300,000 per ship, the final cost thereof to be subject to adjudication . . . ." In the official notification to Sun of that action, Sun's estimate of 60 days delay in delivery of the vessels was noted. In brief, this change enabled certain control functions, most notably throttle control, to be made directly from the bridge and it centralized in a large console located on the bridge certain data, such as temperature readings, originating in the engine room.

Although automation would enable more efficient operation of these vessels the real savings to the ship operator would be realized only with concomitant crew reductions. At the time Change 23 was authorized, it was contemplated that there would be crew reductions and, most likely, consequent rearrangement of crew quarters on these vessels. However, for various reasons including negotiations with labor unions it was not until October 1, 1963, that a representative of the Contract Officer approved Change 48 based on a preliminary estimate of $38,000 per vessel and an estimated delay of work "in the affected areas of the vessel" of 90 days. Change 48 occurred when

Sun had almost completed the original general arrangement plan, resulting in the scrapping of most of that plan. It required single occupancy quarters for 12 less men and mostly entailed an engineering task to accommodate the rearranged crew quarters and changes in auxiliary equipment to those quarters. It also required significant changes to the galley and to pantry equipment.

Subsequently, due to the insistence of labor unions, USL authorized a further change in the arrangement of quarters in the first or second week of February 1964, so as to restore two of the crew members formerly eliminated.[1] This was a year and a half after contract award and only five months from the scheduled contract delivery date for the first vessel. Sun indicated in a letter dated February 14, 1964, to Friede & Goldman, Inc., USL's design agent under this Contract, that the additional cost would be approximately $5,000 per vessel with a delay of 6 to 8 weeks "in development of the area." Sun warned that the change could affect delivery of the first vessel. Five days later Sun explained that the cost estimate in its earlier letter "was a considerable underestimate" and that a revised "preliminary estimate" of costs would be forwarded. On March 13, 1964, USL was advised by telephone that Sun's preliminary estimate of $5,000 per vessel was revised to $58,000 total.

After completing work relating to automating these vessels and the other contract work, Sun delivered the five

1. The record does not reveal when USL authorized or anyone duly authorized by the Board approved this modification of Change 48, if indeed, it ever was approved and authorized or, if indeed, it required approval or authorization. No party discussed this matter in briefs before the Board. We agree that the matter is moot since it is clear from the record that Sun relied on the actions of the Contracting Officer and USL, both of whom acted as though the modification had been approved and authorized or required no approval or authorization.

vessels, Sun Hulls 628 to 632, on November 12, 1964, January 15, 1965, April 14, 1965, June 29, 1965 and September 24, 1965.[2] Since the Contract required delivery of the vessels at 75 day intervals commencing September 29, 1964, the actual delivery dates were respectively 44, 33, 47, 48, and 60 days beyond the scheduled contract delivery date for each of the five vessels.

Thereafter, Sun submitted the required detailed estimates for Changes 23 and 48. The estimates were divided into three parts relating to the basic "hardware" costs for Changes 23 and 48 respectively and to the costs of delay, disruption and other factors caused by performance of the changes. In its originally filed detailed estimates, Sun claimed a total cost of $4,738,516 excluding profit, on account of the changes. This claim was subsequently increased by $480,000 exclusive of profit prior to the Contracting Officer's final decision.

As noted previously, the Contracting Officer's final decision held that the fair and reasonable value of the work caused by the changes was $2,200,000 inclusive of profit. This decision was not rendered until August 21, 1969, nearly four years after Sun completed submittal of the detail estimates in late 1965. The processing of Sun's detailed estimates was prolonged by the following: concurrent, protracted, and inconclusive negotiations to settle this dispute; upward adjustments in the position of the Maritime Administration Staff ("Staff") on Sun's detailed estimates; frequent postponements of Staff decisions to permit Sun and USL to make additional submissions relating to the dispute; changes in the persons authorized to

2. USL's vessel bearing Sun's Hull number 629 was delivered before that bearing Hull number 628. Sun switched the hulls in August 1963 to take advantage of better crane facilities at No. 8 way.

act as the Contracting Officer; [3] and delay in the Contracting Officer's decision to allow Sun to obtain and analyze government files relating to the Staff's position on this dispute.

After the Contracting Officer's decision was finally rendered, Sun and USL appealed by letters dated September 9 and 24, 1969, respectively. Pursuant to Article 35 of the General Provisions of the Contract, these cross appeals, as already noted, were referred to the Board's Representative for hearing and recommended decision.

Lengthy public hearings were held in Philadelphia, Pennsylvania, New York City, and Washington, D. C. from December 1, 1969, to January 20, 1970. Extensive briefs on the issues were filed and oral argument by counsel for all parties was held on March 6, 1970. On June 9, 1970, the Board's Representative served a Recommended Decision in which he recommended seventeen findings and conclusions which, as calculated in a Recommended Order served July 16, 1970, would award $3,820,120 including profit, to Sun and would deny the balance of Sun's then requested claim of $6,688,893, which included profit.

USL and Staff Counsel filed Exceptions to nearly all the findings and conclusions of the Recommended Decision. USL's position is that Sun's recovery must be limited to no more than $1,954,730 while Staff Counsel's position would permit a slightly larger recovery of $2,041,429. Sun filed Exceptions only to that part of the Recommended Decision recognizing 307 days of delay in

3. The following were the authorized Contracting Officer under the Contract as Chief or Acting Chief, Office of Ship Construction for the time period Sun's detailed estimates for Changes 23 and 48 were processed: Vito L. Russo (August 13, 1965 to December 31, 1965); Ludwig C. Hoffmann (July 1, 1966 to November 27, 1967; February 24, 1969 to August 21, 1969); E. Scott Dillon January 1, 1966 to June 30, 1966; November 28, 1967 to February 23, 1969).

delivery of the USL ships caused by the changes rather than 607 delay days. Sun also requested payment of interest from USL on part of Sun's claim. Replies to Sun's Exceptions were filed by USL on September 16, 1970. Sun filed its Answer to Staff Counsel's and USL's Exceptions on September 30, 1970, and on the next day by telegram requested oral argument before the Board.

On March 17, 1971, due to the significant and complex issues involved in this proceeding the Board heard oral argument from counsel for all parties. Subsequently, the Board received certain responses dated March 26, 1971, and a reply thereto dated April 5, 1971, from Sun and USL, respectively, that were generated by discussion during oral argument.

After careful review and study of the entire record and after much deliberation, the Board, for the reasons set forth hereinbelow, adopts some of the findings and conclusions of the Recommended Decision and renders independent findings and conclusions on the remaining unsettled issues in this proceeding.

DISCUSSION

I. Basic "Hardware" Costs

Sun claimed in its detailed estimates a total of $2,094,116 and $242,518, both figures excluding profit, for basic "hardware" costs arising from performance of Changes 23 and 48 respectively. The parties have agreed to $950,000 representing the cost (without profit) of material expended in the automation change. With respect to several costs claimed by Sun to have been incurred due to the changes, no exception has been taken to their implied recommended award in full by the Board's Representative. These costs are insurance and guarantee costs for the automation change and material costs, sub-

contractor charges, and insurance costs for the quarters change. No serious effort was made by USL and Staff Counsel throughout the proceeding to contest these claimed costs and at least with regard to the guarantee costs the Contracting Officer recognized the entire $50,000 claimed. Accordingly, we accept these costs totalling $63,226 as fair and reasonable.

There remains disagreement over the labor and overhead costs associated with Changes 23 and 48 and certain other costs associated with Change 23. Specifically, the areas of disagreement are engineering labor, time and material for electrical cable installation, production labor (excluding electrical labor), service rate, overhead rate or burden, and the cost relating to the second sea trial for the first vessel. The Board's Representative recommended award of $2,099,927 for the total basic "hardware" costs.

A. *Engineering Labor or "Additional" Engineering*

In its detailed estimates Sun claimed 48,863 man-hours of engineering labor were performed on the changed work as a result of Changes 26 and 48[4] and it tabulated the various plans that were modified or redrawn in the development of the changes. Under the Contracting Officer's decision only about 27,190 hours were recognized.

4. The Board's Representative and the parties in their briefs refer to Sun's claim of 40,236 (rather than 48,863) engineering labor hours caused by directly performing the changes. However, Sun's engineering labor claim is based solely on its detailed estimates (Tr. 732, 874), and a review of those estimates in Sun Exhibit 24 reveals that Sun claimed only a total of 48,863 such hours—17,025 such hours as a result of Change 23 (14,500 plus 2,475 for other design and development and a net 50 hours for supplements 1 to 4) and 31,838 such hours as a result of Change 48 (31,500 plus 338 for modification 1 and supplements 2 to 4). The error appears to have been originally made on January 13, 1970, when in the course of this proceeding Sun's position was erroneously explained as a sum of 17,525, 31,500 and 238 hours (Tr. A-1875).

In addition $163,500 (approximately 25,000 hours) of "additional" engineering was recognized, but the $163,500 was not identified as to whether it consisted of only engineering disruption to unchanged work or whether it consisted of some mixture of engineering disruption to changed and unchanged work.

The Board's Representative recommended with respect to this matter:

> "Shipbuilder's estimate of additional engineering production . . . caused by changes found reasonable except for 10% disallowance for overstatement of plans redrafted . . . ."

This recommendation was based 1) on a conclusion that at the Contracting Officer's level the Staff intended to allow Sun approximately the amount of engineering labor it claimed and 2) on a jury verdict judgment that the testimony of USL's experts that Sun's engineering labor was overstated justified reducing Sun's hardware engineering hourly estimate by 10%.

Sun and Staff Counsel take no exception to this recommendation. USL takes exception to the recommendation and claims only $81,780 should be allowed for this item. Its position is that the documentary proof established that only 230,000 total engineering labor hours were expended on the Contract rather than 280,000 hours, and consequently total engineering labor expended supported its contention that no more than $81,750 of engineering labor costs was caused by the changes. Further, USL contends that testimony of USL's experts, underestimated and misinterpreted by the Board's Representative, supports an award of $81,750.

Throughout the hearing in this proceeding it was acknowledged that a MarAd audit had established that

approximately 280,000 man-hours of engineering labor were expended by Sun under the Contract. Almost at the end of the hearing, however, USL's counsel requested, as a result of testimony of Sun's former supervisor of electrical engineering department, data processing records of engineering hours which were later identified as USL Exhibit 51-B. Sun's counsel indicated that figures in USL Exhibit 51-B totaled approximately 280,000 of engineering time; however, USL 51-B totals only about 230,000 hours.

The explanation for the discrepancy is that USL 51-B is on its face incomplete. The exhibit has no ascertainable beginning or concluding page; it has no explanation of what it purports to tabulate; and it has nothing that would indicate it is a complete document. On each page, it is stamped February 7, 1965. The last three vessels under the Contract were delivered after this date on April 14, 1965, June 29, 1965, and September 24, 1965, respectively. Therefore, it is possible that some additional engineering hours for those vessels were not recorded on USL 51-B. Further, even as of February 7, 1965, the document is patently incomplete since the hours indicated for some of the codes (notably code 38) when added, total considerably fewer hours than the sum indicated for those codes. Moreover, there is no explanation or assurance that there are not other codes that recorded engineering hours than those indicated. On this point, Sun's counsel warned: "I should add that it is my understanding that the record is neither complete in the sense it is not final, which we do not have, and that there may well be pages missing." (Tr. A-2324). Since the final records are not available, we must conclude that USL Exhibit 51-B represents only some vague, incomplete statement of the engineering hours and does not contradict the statements in the record that MarAd audit established that Sun performed approximately 280,000 engineering hours under the Contract.

USL's other contention is that the Board's Representative failed to weigh properly the testimony of USL's two independent experts on the engineering labor required by Changes 23 and 48. The experts, Norman W. Penney and Henry W. Tiedmann, examined the plans which Sun asserted were affected by the changes and calculated for each plan the fair and reasonable engineering hours required for a total of 15,158 hours. Their testimony emphasized the techniques used to reduce the redrafting effort and the plans which were either superseded by the changes or were not drawn at the time the changes were authorized and as such did not require redrafting. The testimony of these experts was corroborated by a representative of Friede & Goldman, Inc., Daniel Costello, Jr., who testified that the changes added 15,500 to 19,000 engineering hours to the Contract. On cross examination of these witnesses, it was brought out that the two experts were not apprised of relevant circumstances involved in the plan development (such as the extensive involvement of relevant regulatory bodies in the plan approval process and the conference time required by some of Sun's non-overhead engineering personnel); that one of the experts included time for drawing and supervising drawings but no time for plan approval, yard consultation, study and conference time, while the other gave a minimum of eight hours for each plan and included some time for first/level supervision; that the Freide & Goldman representative gave merely a rough estimate based upon his memory as plan approval agent and not based on a detailed review of the plans.

Sun did not attribute to each plan a set number of hours because of the problems of consultations, investigations, studies, et cetera, peculiarly troublesome under this Contract in the plan development which were in addition

to the actual drafting of plans. For this reason, it is difficult to evaluate the effect of the testimony of USL's witnesses on Sun's engineering labor claim. The Board's Representative, presented with these positions of the parties on this issue, had to exercise his judgment as to the weight to be attributed to the testimony of USL's witnesses. We are not persuaded that there is sufficient basis to set aside his recommendation that Sun's engineering labor claim for Changes 23 and 48 should be reduced by 10%. USL's witnesses were unfamiliar with the significant nondrafting problems associated with performing the changed engineering work. On the other hand, their testimony did contribute to an understanding of the amount of time drafting and supervision should have taken. We consider that the Board's Representative properly weighed this evidence. Therefore, we find and conclude that Sun is entitled to recover additional engineering labor costs incurred due to the changes, based on its claimed 48,863 man-hours, less 10% thereof.

B. *Production Labor.*

(1) *Time and Material for Electrical Cable Installation.*

According to the Board's Representative, Sun claimed in its detailed estimates approximately 135,000 hours of production labor required to accomplish Changes 23 and 48. Over half of those hours related to production labor required to install the electrical cable required by Change 23. The agreed upon calculation to compute installation costs for the electrical cables is to apply a labor coefficient (hours/footage of cable) to total cable footage. There is disagreement, however, over the labor coefficient—which in this context includes hookup of equipment, testing and calibration—and the total cable footage, which is the length of cable drawn from the shop as required by Change

23 before installation aboard the vessels. Before the Board's Representative, Sun advocated a .8 labor coefficient and 19,300 feet per vessel of gross cable footage. Staff Counsel and USL advocated a .39 labor coefficient and 17,195 feet per vessel of gross cable footage.

The Board's Representative recommended the following:

> "Dispute over time and material for electrical cable installation resolved on median basis of multiplying 18,150 feet per vessel × .6 hour labor coefficient. Jury verdict approach sanctioned by Court of Claims and Board of Contract Appeals decisions followed . . . ."

The Board's Representative reasoned that since there was disagreement among Staff Counsel and his witnesses and disagreement between Staff Counsel and Sun, and due to the "inherent nature of the dispute," the subject matter was not susceptible to precise determination without actually measuring the cable installed, which could not be conveniently accomplished. Hence, under these circumstances, the Board's Representative felt it appropriate, pursuant to relevant administrative and judicial precedent, to make a judgment determination, much as would a jury in a contract damage suit.

Sun takes no exception to the recommendation. Staff Counsel in his exceptions continues to contend for a labor coefficient and gross cable footage of .39 and 17,195 feet respectively. USL agrees with this position. Exception is also taken to Sun's use of uncorroborated estimates and to the use of the jury verdict method when there were available methods for ascertaining the labor coefficient and gross cable footage and when testimony of Staff Counsel's witnesses was not in conflict.

Based upon this record we are not convinced by the exceptions of Staff Counsel and USL that the recommendation must be set aside and their position adopted.

Staff Counsel's labor coefficient of .39 is indisputably derived from Sun's cost structures (average of 76,802 hours per vessel)[5] and testimony of Sun's witnesses on purchased cable footage used per vessel (roughly 200,000 feet). Also, indisputably the gross cable footage of 17,195 feet was derived by the usual MarAd procedure of measuring the cable to be installed as indicated by working drawings and with allowances for three dimensional movements, obstructions, etc. (12,737 feet) and applying a waste factor thereto (35% as suggested by Sun's witness).

We have several problems with this approach. It ignores conflicting evidence by the Contracting Officer that notwithstanding other testimony by MarAd witnesses he would use .6 labor coefficient (including hookup and testing) as he had done in his decision. It accepts without documentary proof the approximation by Sun's witnesses of the total purchased cable footage used per vessel. It does not take into account that the changed work was more difficult than new construction work. Finally, the method of deriving total cable footage from working plans can only be a rough estimate and, at best, accurate within a given estimating range.

On the other hand, we have problems with Sun's position of a .8 labor coefficient and total cable footage of 19,300 feet. This position was not explained or scrutinized in depth at the hearing by Sun, and Sun did not put into evidence the cutting records, from which the total cable footage was derived.

5. There is controversy, however, over the exclusion of 2000 hours of calibration, test and checkout on the console by non-electrical personnel.

Given the imperfections of both Sun's and Staff Counsel's positions, the numerous allowances involved in the estimates and the judgment involved of the difficulty and scope of the changed work, we conclude this issue is not susceptible of precise resolution. Further, it is impractical, if not impossible, to measure the electrical cable actually installed aboard these USL vessels, and even if such measurement were undertaken the controversy that has marked this proceeding to date indicates that dispute would remain over the difficulty and scope of the changed work. For the same reason we have serious doubts that any further proceeding would produce any better foundation for an award. Under Article 36 of the General Provisions of the Contract, the parties have agreed to this Board resolving disputes. Once Sun demonstrates that it is entitled to recover for a particular cost that it, in fact, incurred because of a change, we consider it our obligation, in circumstances such as these, to resolve the amount of recovery on a reasonable basis. In similar circumstances, the Court of Claims in breach of contract cases[6] and in cases reviewing appeals from the Boards of Contract Appeals[7] have used the "jury verdict method," although it is sometimes remarked that the standard is not favored and is only used when no more reliable method for computing costs or damages is available.[8]

Staff Counsel's objections to the use of the jury verdict method by the Board's Representative are based upon the asserted reliability of Staff Counsel's position on this issue

6. *E.g., Specialty Assembling Co. v. United States*, 174 Ct. Cl. 153, 184, 355 F. 2d 554, 572 (1966); *Western Contracting Corp. v. United States*, 144 Ct. Cl. 318, 336, 373 (1958).

7. *E.g., Electronic & Missile Facilities, Inc.*, 189 Ct. Cl. 237, 253, 416 F. 2d 1345 (1969).

8. *E.g., Sternberger v. United States*, 185 Ct. Cl. 528, 401 F. 2d 1012 (1968).

and the asserted weaknesses in Sun's position. We have already covered both objections and concluded that neither approach is productive of an adequately supported award, or in other words, under the circumstances there is available no more reliable method than the jury verdict method for computing these costs.

Using the jury verdict method for computing these costs, we find and conclude that as fairly as possible under these circumstances a labor coefficient of .6 and a total cable footage of 18,248 feet represents the reasonable value of performing this changed work. This resulting award for the total cable footage is roughly within the estimating range of both positions and for the labor coefficient corresponds to the judgment of the Contracting Officer which remained unchanged during this proceeding. Further, in effect, this resolution permits the previously discussed imperfections of both Sun's and Staff Counsel's positions to be offset.

(2) *Other Production Labor.*

The balance of the total hours for production labor claimed by Sun in its detailed estimates, according to Staff Counsel, approximates 50,000 man-hours. This subject concerns such matters as installation of the console, revisions in the galley, and installation of sensors. The precise total number of production hours involved is not indicated in the briefs or in Sun's detailed estimates.

The Board's Representative allowed without comment all the claimed production labor hours. Staff Counsel takes exception to this recommended award and would allow only 26,385 hours based on adjustments of the original staff evaluation of Sun's total production labor claim to reflect the positions of the Chief of the Division of Estimates, the Contracting Officer, and Staff Counsel.

USL agrees with Staff Counsel's position. Staff Counsel argues that Sun's claim was not supported by backup data or cost returns, that the Board's Representative should have given the Staff estimate some credence, and that "it may be that if ever a jury verdict approach were applicable, it might well apply here." In support of Staff Counsel's position MarAd's Assistant Chief of Division of Estimates testified on a few of the items included in production labor, specifically, the handling and installation of the console in the engine room, the installation of temperature and pressure sensors, and the installation of the fuel and cargo oil tank heating and supply return lines. The stated purpose of his testimony was to show a "great disparity" between the amount Sun claimed and the amount indicated by the evidence and more broadly to cast doubt on the credibility of Sun's entire claim.

We are persuaded upon a review of the entire record that Sun's detailed estimates of the production labor (excluding electrical labor) are fair and reasonable.

The first item to which the MarAd's Assistant Chief of Division of Estimates testified concerned production labor needed to handle and install the console as required by Change 23. Initially, he argued that Sun's estimate of 700 hours per vessel for this task was erroneous because Sun simply projected the extraordinary production labor required for the first vessel to the other four vessels. The Staff witness admitted, however, that 900 to 1000 hours was reasonable for the first vessel and Sun emphasized that the 700 hour figure was an average figure. The Staff witness then contended that the average figure per vessel should be 600 hours. On cross examination, it was brought out that this represented about a 13% difference and the Staff witness admitted this was "within the normal range of estimating." (Tr. A-1686.) Therefore, since Sun's esti-

mates are within the conceded normal range of estimating we perceive no basis to reduce Sun's production labor estimate in regard to handling and installing the console.

The next matter raised concerned the production labor involved in installing pressure sensors and gauges required by Change 23. The Staff witness' principal approach was to use Sun's credit of 20 hours per standard sensor or gauge per vessel as the appropriate labor charge for installing the new pressure gauges and sensors required by Change 23 and therefore urged that Sun's estimate of 61 hours per senior or gauge or 1100 hours total be reduced to 360 hours. Sun's rebuttal witness, its Machinery Superintendent, who was present when the new gauges and sensors were installed, effectively refuted the premise that work related to installing the credited standard gauges or sensors was comparable to work related to installing the gauges and senors required by Change 23. The standard gauges and sensors weighed about half a pound, were mounted on a common board, and required little, if any, foundation. But the sensors and gauges required by Change 23 weighed 20 to 30 pounds, required elaborate foundations and shielding and needed ready access for regular calibration. It is obvious, therefore, that the Staff (and Staff Counsel) were estimating installation costs for different sensors and gauges than required by Change 23.

Staff Counsel in its post hearing brief raised another issue on this matter as a result of testimony of Sun's rebuttal witness. A question was directed to Sun's rebuttal witness of the relative cost of installation of the special sensors and gauges required, as compared to those originally specified. The witness replied, "twice as much time just the time spent on mounting and foundation and welding, et cetera." (Tr. A-2346.) Since 20 hours were estimated for installation of each original sensor or gauge Staff

Counsel argued this testimony indicated 40 hours for such installation rather than the 61 hours claimed in Sun's detailed estimates. We are not persuaded the testimony concerned conflicts with Sun's detailed estimates. Sun's rebuttal witness principally testified on the technical requirements for installation of the different sensors and gauges with which he was most familiar. The record is silent with respect to his familiarity with or expertise in estimating the cost of such installation. His response to the question of the cost of installation was certainly not a precise answer, and it is uncertain whether it had reference to the total installation cost or to "just the time spent on mounting and foundation and welding, et cetera." Under these circumstances, it can at best be said, that the witness giving a very rough estimate of the console installation time involved and that he was not attempting to state with precision Sun's claim. Accordingly, we find no basis from the foregoing to reduce Sun's claim in regard to installation costs for certain sensors and gauges.

The final matter raised involved Sun's claim for production labor for installing fuel oil heating steam supply and steam condensate returns. The Staff witness argued that the credit involved in not installing the steam supply and condensate returns as originally specified should be increased because Sun in its detailed estimate stated that originally the condensate returns were to run on the exposed main deck whereas according to the original specification the lines should have been run "through the cargo spaces . . . through brackets to afford protection." However, since there were no such brackets for these ships the original specification was admittedly ambiguous. Friede & Goldman who drafted the specification stated the specification permitted "overdeck runs." The Staff witness acknowledged this interpretation was reasonable though he

contended "the tank level *may* be considered as a deck in shipbuilding terminology." (Tr. A-1681. Emphasis added.) While the tank top may be considered a deck, it is undisputed that the main deck is a deck. Sun so interpreted Freide & Goldman's understanding of their specification. We consider that that interpretation by Sun is reasonable.

Based on the foregoing discussion of selective contested elements of Sun's claim for production labor hours (excluding electrical labor), we find and conclude that Sun is entitled to recover for these elements of its claim. Further, since Sun has presented detailed estimates of the remaining elements of its claim which have not been seriously questioned by USL or Staff Counsel other than by certain exhibits that were not explained or scrutinized in depth at the hearing, we find and conclude that Sun is entitled to recover its entire claim for production labor (excluding electrical labor) resulting from performance of Changes 23 and 48.

(3) *Service Rate*

Production labor hours are used as a basis for calculating the cost of Sun's services. Sun's services cover lighting, crane service, cleaning time, material handling, and transportation. "Traditionally," MarAd and Sun have agreed to a 10% service rate. That rate was applied to all other change order settlements under the Contract which were relatively minor. As a part of adjudicating Sun's detailed estimates for Changes 23 and 48, and apparently after settlement of other change orders under the Contract, it was determined that Sun actually experienced a 7½% service rate on this Contract.

The Board's Representative recommended the following with respect to this matter:

> "Service rate computed at 10% of direct labor traditionally allowed by MarAd authorized rather than 7½% Staff recommendation . . . ."

He reasoned that since Staff Counsel had not addressed himself to this matter in post hearing briefs and since the matter was not litigated in depth at the hearing, Sun's statement that the 10% rate was traditionally allowed was unchallenged.

Staff Counsel and USL take exception to this recommendation, arguing that the service rate of 7½% established by MarAd audit of Sun's records and actually experienced by Sun under the Contract is the fair and reasonable service rate figure.

As between a traditionally allowed service rate and a service rate established by audit for this Contract, the latter must be allowed in determining the cost Sun is entitled to recover for *actual* work caused by Changes 23 and 48. Sun has presented no other arguments why the audited rate should not be allowed and we know of no reason why it should not be permitted. We note that the audited data as presented in Staff Counsel's Exceptions would indicate a service rate of less than 7½% but that it did not account for service hours expended during the outfitting period. When these service hours are taken into account, a service rate closer to 7½% is indicated. We, therefore, find and conclude that Sun is entitled to recover its changes-caused production labor costs based on a 7½% service rate.

C. *Overhead Rate*

Sun's overhead rate or burden is a ratio of indirect expenses to total direct engineering and production labor expenses. The overhead rate established by MarAd audit for the Contract averaged slightly under 72%. Apparently,

prior to that audit MarAd had agreed to a 75% overhead rate and had settled all other change orders under the Contract (which were relatively insignificant) on that basis.

The Board's Representative recommended the following on this issue:

> "Overhead for changed work allowed at 75% of direct labor, the rate previously established on other settled changes, rather than 72% average of entire contract including unchanged work . . . ."

The basis for this recommendation was that due to the complexity and novelty of the automation change and the extensive reworking involved in the successive quarters changes the changes required significant management involvement and "skull" sessions over a long period of time, justifying the higher burden. Further, it was reasoned that the 72% average rate was insufficient compensation for overhead expended on changed work alone and, therefore, the Staff was not justified in commingling changes costs with costs for unchanged work. Finally, the Government was rebuked for putting Sun in a position of receiving a larger allowance for settling a dispute than it would receive if it had litigated.[9] USL was understood to have expressed willingness in its written presentation to pay the 75% rate.

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9. The concern of the Board's Representative over the Staff's willingness to concede a greater overhead rate for settlement purposes than for formal adjudicating purposes is difficult to follow. The Staff may have a multitude of good and sufficient reasons for settling a matter that are not entirely related to its position for "litigating" purposes, including, of course, the hazards of "litigation" itself. Naturally the Staff should, in its unbiased, independent, and fair judgment, have a sound, reasoned basis for formally adjudicating a matter.

Staff Counsel and USL take exception to this recommendation stating that the basis given for the recommendation is irrelevant to the concept and function of the overhead rate. Staff Counsel argues that Sun's overhead rate is calculated by placing into an overhead pool all indirect expenses such as salaries of high level management and conference time of supervisory personnel and then allocating the overhead pool 100% to all contracts in the yard for a given time period based on their respective total direct labor incurred for that period. Hence, it is argued, to allow more than the actual overhead rate would be to permit Sun to recover more than 100% of the overhead expenses. As for the commingly of changed and unchanged work in the 72% average rate it is contended that Sun does not segregate overhead costs on a changed work basis and that the very use of an overhead rate is confirmation of that fact. Therefore, any distinction between overhead costs for changed versus unchanged work would make no sense at all. USL adds a denial of ever having expressed willingness to pay a 75% overhead rate.

We are persuaded that Sun is entitled to recover its costs based on a 72% burden rather than a 75% burden. Further, we find that the 72% rate most probably reflects a higher than the normal rate experienced on the unchanged contract work.

Staff Counsel has pointed out that Sun's overhead rate is calculated by pooling all indirect expenses and allocating them to all work in the yard for a given time period based on the amount of total direct labor incurred. More specifically, the 72% rate established by MarAd audit on this Contract was computed from ratios of direct and indirect labor expenses experienced in all the shops in Sun's yard for 1963, 1964 and 1965. Significantly, all shops are included in this process even though the rocket

fabrication shop handled no new vessel construction work and even though most of the other shops handled work in addition to new vessels. Further, the shops are taken as an aggregate with no division between work for vessel construction and other work. Sun's accounting practice during this period did not permit further breakdown on the composite overhead rate. Hence, the relationship between the 72% rate and new vessel construction work, let alone work under this Contract, is difficult, if not impossible to ascertain. The only evidence on the relationship of the 72% rate and the rate for contract work was testimony by MarAd's Chief of the Audit Branch in the Eastern District that the overhead rate on contract work was possibly closer to 70%.[10] Under that view, the 72% rate includes compensation for more overhead expenses incurred on changed work than unchanged work. In any event, it makes no sense to award a higher overhead rate for changed work than for other contract work, in this instance, because the very concept of an overhead rate, as used by Sun, is to permit allocation of overhead expenses, such as those incurred in performing the changed work, that are not susceptible with any fair degree of accuracy or reasonableness to direct allocation. Moreover, if in fact there were more indirect expenses expended for changed work, the continuing overhead portion would be recouped through Sun's unabsorbed overhead claim, since under that claim Sun recovers its total continuing overhead expenses incurred in performing the entire contract work during the changes–caused delay period less those continuing overhead expenses reflected in the 72% overhead rate on the changed work.

10. Tr. A-2228. Sun argued that a 75% rate represented the increased overhead expenses for the changed work, but it presented no testimony developing this point and it neither stated nor explained this position in the context of the composite overhead rate.

As for MarAd's use of an estimated 75% overhead rate to settle change orders under this Contract prior to fixing the actual rate, the overhead rate Sun actually incurred under the Contract may be more *or less* than the estimate of that rate. Once the actual overhead rate was established there is no authority to award Sun the estimated rate. Accordingly, we find and conclude that Sun is entitled to recover a 72% overhead rate on the direct labor performed in the changed work required by Changes 23 and 48.

D. *Other Costs–Second Sea Trial.*

The only other contested basic hardware costs claimed by Sun is the cost of pierside testing and the second sea trial of the first vessel to be delivered.

The Board's representative recommended the following:

> "Cost of second sea trial allocated two-thirds to automation change and one-third to single plane engine addendum . . . ."

Sun and Staff Counsel take no exception to this recommendation. USL's sole objection is that such allocation is in direct conflict with Article 11 of the General Provisions of the Contract which provides that "All expenses of such trials . . . shall be borne by the Contractor."

Article 11 covers "trials and tests provided in the Plans and Specifications, in the Special Provisions, and in these General Provisions" and is intended to assure compliance with those contractual terms. But, when a change is authorized which necessitates additional expense for trial and test, Article 4(a) of the General Provisions of the Contract, which provides for recovery of 110% of the estimated cost of changed work, would include recovery of the

expense allocable to the extra trials and tests required by the change. Therefore, we are of the opinion that Article 4(a) is controlling in this circumstance where the pierside testing and second sea trial primarily resulted from the automation change. Since no exception is taken to the two-thirds/one-third allocation we adopt the above recommendation of the Board's Representative on this issue.

I. Delay Associated Costs—Legal Issues.

Sun in its detailed estimate separately claimed certain costs other than basic hardware costs (referred to hereinafter as "delay associated costs" for convenience of identification) which it asserted were incurred in performance of the *unchanged* work by reason of Changes 23 and 48. These delay associated costs are delay costs (labor and material escalation, financing, services, insurance, and "unabsorbed" overhead costs) and disruption, congestion, "hire-fire" or layoffs, and acceleration costs. All of these types of delay associated costs are sometimes referred to as "indirect" or consequential costs. USL, but not Staff Counsel, takes exception to the recommendation of the Board's Representative that as a matter of law the *Rice* doctrine does not apply to the changes clause of this Contract and that under this Contract delay associated costs may legally be recovered. Additionally, USL and Staff Counsel take exception to the recommendation of the Board's Representative that as a matter of law Sun can recover any "delay" costs allegedly incurred prior to the scheduled contract delivery dates.[11] The exceptions

11. Staff Counsel encompasses within such "delay costs" only those costs referred to herein as delay costs. USL's position, however, on the *Rice* doctrine and cases applying that doctrine draws no distinction between such delay costs and disruption, congestion, and other costs which may have been incurred prior to the scheduled contract delivery dates.

taken to the factual recommendations of the Board's Representative with respect to delay associated costs are considered in Parts III and IV.

A. *The "Rice" Doctrine.*

The *Rice* doctrine has developed out of four Supreme Court cases [12] and their application and most particularly *United States v. Rice*. In that case, the Supreme Court held that a contractor was not entitled to recover certain costs arising from delay caused by the Government because the "changes clause" contained in that contract was not broad enough to include damages for delay. In *Rice*, the respondent was a contractor who had agreed to install plumbing, heating and electrical equipment in a Veterans' Home to be constructed by another contractor. When unforeseen conditions were encountered, it became necessary for the Government to stop the work of the general contractor while changes were being prepared and ordered. During the period of delay, the respondent was unable to proceed with the plumbing, heating and electrical work. This delay resulted in increased overhead costs for respondent. The Supreme Court held that the respondent was only entitled to an extension of time for the performance of his contract and that he could not recover his costs arising from the delay.

The Court recognized that recovery was dependent upon the rights of the parties as set forth in the contract in question. It stated:

> "If there are rights to recover damages where the Government exercises its reserved power to delay,

12. *United States v. Howard P. Foley Co.*, 329 U. S. 64 (1946); *United States v. Rice*, 317 U. S. 61 (1942); *H. E. Crook Co. v. United States*, 270 U. S. 4 (1926); *Chouteau v. United States*, 95 U. S. 61 (1877).

> they must be found in the particular provisions fixing the rights of the parties." (317 U. S. at 66)

The changes clause in the *Rice* contract provided that if a change caused "an increase or decrease in the amount due under this contract, *or* in the time required for its performance, an *equitable adjustment* shall be made . . . ." (Emphasis added.) The Supreme Court interpreted that language to mean that

> "'an increase or decrease in the amount due' should be met with an alteration of price, and that 'an increase or decrease . . . in the time required' should be met with alteration of the time allowed; for 'increase or decrease of cost' plainly applies to the changes in cost due to the structural changes required by the altered specifications and not to consequential damages which might flow from delay taken care of in the 'difference in time' provision." (317 U. S. at 67)

The legal principle enunciated in the *Rice* case—that "an increase . . . in the time required" for completion which is caused by a change under a contract should be met only "with alteration of the time allowed" and not with a cost adjustment—has been followed and applied by the Court of Claims,[13] the Boards of Contract Appeals,[14] and the Comptroller General.[15] Commentators have frequently criticized the doctrine as leading to harsh and unfair results by ignoring the effect of delay on the cost of performance.[16] The doctrine does not apply to situations involving breach of contract by the Government or unreasonable delay caused by the Government,[17] neither of which situation is herein involved. In two fairly recent cases, *Paul Hardeman, Inc. v. United States*, 406 F. 2d 1357 (Ct. Cl. 1969), and *Electronic & Missile Facilities, Inc. v. United States*, 416 F. 2d 1345 (Ct. Cl. 1969), the Court of Claims further distinguished the *Rice* doctrine by permitting recovery of disruption to unchanged work and cost of labor inefficiency, respectively, arising from delay caused by changes or changed conditions on the basis that in those cases such costs "were the direct and necessary result of the change."[18] Hence, even though the *Rice* doctrine continues to be viable law some recent cases permit recovery of delay associated costs if they "were the direct and necessary result of the change."

As the *Rice* doctrine applies to this dispute and to MarAd shipbuilding contracts, the Board's Representative recommended the following:

> "*Rice Doctrine* held not applicable to changes clause in MarAd shipbuilding contract due to language dif-

13. *E.g.*, *John McShain, Inc. v. United States*, 412 F. 2d 1281 (Ct. Cl. 1969); *Jefferson Constr. Co. v. United States*, 392 F. 2d 1006 (Ct. Cl.), *cert. denied*, 393 U. S. 842 (1968).

14. *E.g.*, *Murray-Sanders & Associates*, ASBCA No. 6873, 1962 BCA par. 3408; *Peter Kiewit Sons' Co.*, IBCA No. 405, 65-2 BCA par. 5157; *Wilkins Co., Inc.*, BAACAB No. 16, 66-13, 65-2 BCA par. 5242; *Terminal Constr. Corp.*, CSBCA No. 2693, 68-2 BCA par. 7284, *aff'd on reh.*, 69-1 BCA par. 7426.

15. *E.g.*, Comp. Gen. Dec. B-161179 (Aug. 7, 1967 (Unpublished) (standard form 23A construction contract-*Rice* prohibits

15. (Con't.)
recovery of costs attributable to delay in *work which was not changed* but permits such recovery with respect to delay in *work which was changed*).

16. *E.g.*, Shedd, *The Rice Doctrine and The Ripple Effects of Changes*, 32 Geo. Wash. L. Rev. 62, 69 (1963); Nash & Cibinic, *The Changes Clause in Federal Construction Contracts*, 35 Geo. Wash. L. Rev. 908, 937-38 (1967); Note, *The Rice Doctrine After Twenty-Five Years: Bloody But Unbowed*, 39 U. Colo. L. Rev. 533 (1967).

17. See *Laburnum Constr. Corp. v. United States*, 325 F. 2d 451, 458, 103 Ct. Cl. 339, 350 (1963).

18. In *Electronic & Missile Facilities* the Court of Claims reversed the ASBCA on this very point. ASBCA No. 9866, 66-1 BCA par. 5307, at 24,953.

> ferences, the rule of construction that ambiguities in contracts are construed against the draftsman, and the FMC [*sic*] policy continued by MarAd recognizing delay, disruption and rip-out as foreseeable and legitimate costs of changes under contract . . . ."

Only USL takes exception to this recommendation arguing that the *Rice* doctrine bars recovery of "consequential delay costs to unchanged work," that the *Rice* doctrine is applicable to this Contract, that Articles 4, 5 and 8 of the General Provisions of this Contract clearly indicate that recovery of delay associated costs is not intended, that the Federal Maritime Board policy was adopted for reasons other than recognition of delay associated costs and that MarAd's and Sun's prior interpretation of the Contract is irrelevant inasmuch as it was not communicated to USL.

We are persuaded by the decision of the Board's Representative and the presentation of Staff Counsel and Sun that the *Rice* doctrine is not controlling for MarAd shipbuilding contracts such as herein involved.[19] As recognized by the Supreme Court in *Rice* and subsequent cases developing and applying the *Rice* doctrine, whether the costs in question are recoverable is determined by contractual interpretation. As noted hereinabove, the changes clause in the *Rice* contract provided that if a change causes

> "an increase . . . in the amount due under this contract, or the time required for its performance, an equitable adjustment shall be made . . . ."

The changes clause of the MarAd Contract, Article 4, provides in part:

19. Because of this conclusion, we need not decide whether the precedents of *Hardeman, supra, and Electronic & Missile Facilities, supra,* are controlling in this instance and whether under those cases the cases incurred to unchanged work claimed herein by Sun were under the facts of this dispute "the direct and necessary result of the change[s]."

> "(c) [With respect to any changes proposed by the Owner] the Owner may request . . . the Contractor to submit to the Owner the Contractor's preliminary estimate of the change in cost, weight, moments and centers and delay in delivery of the Vessel . . . ." [and]
>
> "(d) Promptly and within a reasonable time . . . after receipt of directions from the Owner . . . to make a change in the Plans and Specifications . . . the Contractor shall furnish to the Owner, in writing, a statement of its detailed estimate of the net increase or decrease in the *cost of the contract work* and probable delay in delivery of the Vessel to result from such change." (Emphasis added.)
>
> "(e) [Thereafter] . . . One hundred and ten per cent (110%) of the net increase in estimated *cost*, if any, resulting from *all change cost estimates*, as approved or as finally determined, shall be *added* to the contract price as an adjustment thereof." (Emphasis added.)

Articles 5 and 6 of the General Provisions of the Contract, respectively, provide for extension of time and liquidated damages for unexcused delay in delivery. The important differences between the MarAd Contract and the *Rice* contract and cases following the *Rice* doctrine is that 1) whereas the latter provides for an *equitable* adjustment in terms of cost *or time* for a change, the MarAd provision provides *only* for an adjustment in terms of cost and 2) the cost adjustment in MarAd contracts is founded on change cost estimates which detail the net increase or decrease in the "cost of the contract work" and not just the changed work.

USL retorts that it matters not at all whether the cost adjustment and time extensions are in the same or different provisions or even if there is a time provision because under the *Rice* doctrine there must be a specific provision for recovery of consequential delay costs.

We are persuaded, however, that even if specific language must be incorporated in a change clause to permit recovery of delay associated costs that Article 4 of MarAd contracts such as this Contract expressly and positively permits such recovery in providing only for a cost (not "equitable") adjustment based on the change in cost of "the contract work." We acknowledge, of course, that the language is not so pristine clear as to prevent any and all arguments to the contrary, but we consider that this interpretation is the plain meaning of the words involved.

This interpretation of Article 4 of this and other similar MarAd shipbuilding contracts has been consistently applied and has been, to our knowledge, virtually unchallenged until this present dispute. Thus, countless settlements of change disputes under these contracts have included recovery for these types of costs with the exception of pre-contract delivery date delay costs, which will be discussed *infra*. A further indication of this consistent acceptance of this interpretation of MarAd's changes clause is the policy of the Federal Maritime Board from November 1960 limiting construction-differential subsidy participation in major changes not resulting in an advance in the art of vessel construction to the cost based on the change having been included in the original bid at the time of contract award.[20] In explaining this policy in 1964 this

20. This policy was instituted by a letter dated November 3, 1960, from the Federal Maritime Board to the Committee of American Steamship Lines. The present policy on CDS participation under which Changes 23 and 48 were considered appears in 46 C. F. R., Part 251, Appendix No. 1 (see 30 F. R. 11756). It provides for full subsidy participation under certain criteria including

Board stated in a published Final Decision [21] that among the problems of vessel construction changes subject to subsidy participation is that:

> "Disruption, delay and rip-out necessarily accompany changes directed in the latter stages of construction and have the effect of substantially increasing the ultimate cost of the vessel."

A final indication of consistent Agency interpretation of this contract clause is the Staff position throughout this dispute recognizing some engineering disruption and some delay costs.

USL argues that MarAd's prior interpretation of the Contract, unknown to USL, and Sun's and Staff Counsel's *ex post facto* characterization of the Contract are totally irrelevant. Assuming USL's lack of knowledge of MarAd's interpretation, USL's argument is still inapplicable. MarAd's and Sun's interpretation comports with the plain meaning of Article 4 and that interpretation is available to all who have knowledge of the Contract. A subjective personal interpretation of the Contract, however, by any party, including USL, is irrelevant.

USL also argues that Article 4(b) supports their contention that delay associated costs are not recoverable under the Contract. Article 4(b) provides that the contractor is not required to proceed with a major owner-

20. (Cont'd.)
generally changes that are "necessary to optimize the economic utilization of mechanization and labor saving equipment with the potential of reducing operating-differential subsidy (ODS)." Subsidy participation limited to the original bid basis is restricted to where the subsidy participation is approved only on the basis that with reasonable certainty the added investment will produce a return to the owner of at least 10 percent per annum after taxes over the life of the investment.

21. *American Export Lines, Inc.—Contract Appeal*, 5 S. R. R. 343 (1964).

directed change unless the owner agrees to pay "damages from the consequent delay or other work of the contractor then under contract . . . ." USL contends that by expressly limiting recovery of these consequential delay costs to the "other work of the contractor," this Article indicates that recovery of delay costs to the work of the subject contract is not intended. We do not, however, read this provision as a limitation on recovery of delay costs for work performed under the Contract. Article 4(b) specifically provides for recovery of delay costs for other work of the contractor because such costs would clearly not be recoverable under Article 4(e) as increased costs of performing this Contract.[22]

We, therefore, find and conclude that because of the differences in language between the contract in *Rice* and cases following *Rice* and the instant Contract, the *Rice* doctrine is not applicable to MarAd shipbuilding contracts such as this Contract and does not bar recovery of delay associated costs.

B. *Entitlement to Pre-Contract Delivery Date Delay Costs*

Probably the most important legal issue presented in this dispute is whether Sun is entitled to changes-caused "delay" costs incurred prior to the scheduled contract delivery dates (referred to herein as "pre-contract [or

22. USL attempts to raise another argument under Article 4(c). It, however, misstates that that Article requires certain contractor's estimate of delay to its other work to be in terms of cost, but its estimate of delay to the work under the subject contract to be in terms of delay in delivery of the vessel. In fact, Article 4(c) requires that such contractor's estimate for its "other work" be in terms of "the damage cost referred to in 4(b) above" and that the estimate for work under the subject contract to be in terms of "the change in cost . . . and delay in delivery of the Vessel." Further, since Article 4(b) is concerned with work other than the subject contract it concerns only damages and obviously not an extension of time.

precontract] delivery date delay costs"), if Sun can sustain the burden of proving that but for the changes it would have delivered the vessels before the delivery dates provided in the Contract. Assuming that pre-contract delivery date delay costs are recognized as "delay" costs notwithstanding they occur prior to scheduled contract delivery dates, such costs are only a specialized form of delay associated costs and as such the preceding discussion on the *Rice* doctrine would *a fortiori* apply to these costs. However, because of the special nature of these costs occurring prior to the scheduled contract delivery dates separate legal issues on entitlement are raised.

The Board's Representative recommended with respect to this issue that

> "Where the contract calls for vessel delivery upon completion and testing after five days notice to the Owner Shipbuilder is entitled to recover established delay associated costs under the changes clause even though arising before scheduled contract delivery dates . . . ."

His discussion of the issue shows that besides the contract language and its interpretation by MarAd he was influenced by certain rules of contract interpretation and by certain peculiar facts surrounding this Contract which are set forth hereinbelow.

USL and Staff Counsel take exception to this recommendation and argue that as a matter of law Sun is not entitled to recover such delay costs for the period between the dates Sun would have delivered the USL vessels but for the changes and the original scheduled contract delivery dates.

We find this issue intrinsically difficult to resolve. On the one hand, there are the following strong arguments for denying recovery:

1. *Logic and Policy*—In submitting bids to perform contract work within a given length of time and no later than the scheduled contract delivery dates, shipbuilders agree to bear all costs that might be incurred in performing the contract work (including any changes work) until the scheduled contract delivery dates. MarAd and USL have a unilateral right to impose changes that produce no recoverable delay costs until after the scheduled contract delivery dates. The incentive to delivery early is unaffected by this approach because the yard has its facilities and manpower available earlier for other work. A contrary result would dilute the authority to issue change orders and would create havoc in determining the low responsive bidder. Neither MarAd nor the owner would be able to determine which bid is really lowest because they would not know what the subjective intent of the bidder is with respect to early delivery. On the other hand, if a contractor is basing his low bid on the possibility of early delivery, he can expressly make the early delivery date an element of the bid and thereby accept the risk of failing to meet the early delivery date.

2. *Contract Theory*—Article 1(b) does not provide a contractor a "right" to deliver early. It merely provides an inchoate right to deliver early after performance of "contract work," including work resulting from change orders. This is confirmed by Article 13 of the General Provisions of the Contract which provides that the Owner shall accept a vessel if, after requisite trials, ". . . the requirements . . . of the Special Provisions, these General Provisions and the Plans and Specifications and *changes thereto* have been met . . ." (Emphasis added.) Article 4(e) when read in conjunction with Articles 1(b) and 13 does not authorize recovery of pre-contract delivery date delay costs. Article 4(e) provides for recovery "of the net increase in estimated cost," namely the net increase "in the cost of the contract work." Under Articles 1(b) and 13 the "contract work" is inclusive of work resulting from changes and no right to early delivery attaches until after performance of the non-changed contract work and performance of the work resulting from changes. If the work resulting from the changes extends until the scheduled contract delivery dates or thereafter the right to early delivery never arises. In other words, under the Contract the "contract work" is not increased, within the meaning of Article 4 and on the basis of the contractor's bid for the Contract, in the situation of work resulting from a change extending the time for completion of the Contract at least to the scheduled contract delivery dates. In that situation there has only been a frustration of the contractor's *plans* to deliver early. Moreover, to permit recovery under this fixed price Contract would create an inequality in mutuality; the yard would have the unexpressed and unspecified right to early delivery but no obligation and no penalty for failing to do so. The owner, on the other hand, could only make plans and commitments in the expectation of an early delivery date at his peril.

3. *Precedent*—There is no precedent to support such recovery. In the context of the *Rice* doctrine and possibly of broader applicability, *United States v. Blair*, 321 U. S. 730 (1944), which has not been overruled, denied such recovery based on lack of explicit language in the contract to cover such costs. In that case, the Court said:

"The Government and respondent covenanted that the construction work would be completed within 420 days . . . . They cannot be said to have executed these contracts in contemplation of the then unrevealed intention of respondent to complete his work three and one-half months early. The fact that respondent subsequently gave notice of this intention to all the other parties concerned could not give rise to a new obligation on the Government to compel accelerated performance from Redman.

Respondent had the undoubted right to finish his construction work in less time than the stipulated 420 days, but he could not be forced to do so under the terms of the contract. To hold that he can exact damages from the government for failing to cooperate fully in changing the contract by shortening the time provisions would be to imply a grossly unequal obligation. We cannot sanction such liability without more explicit language in the contract."

4. *Circumstances of this Contract*—USL and MarAd did not learn of Sun's expected early delivery date at the time of bidding on this Contract or at the time of award of that Contract. Sun did not apprise USL or MarAd of these costs at the time issuance of these changes was being discussed. Further, heretofore such costs have not been recognized and USL and MarAd had no basis to expect such costs. Moreover, Sun's proof consists of back-tracking from actual delivery dates or of relying on very broad estimates or schedules drawn up as a management technique to spur production.

On the other hand, strong arguments have been presented by the Board's Representative and Sun that would permit recovery:

1. *Logic*—These costs occur because of the passage of time and are the direct consequence of the delay induced by the changes; the daily costs of delay are the same whether occurring before or after scheduled completion date. Therefore, these costs, as costs directly related to the changes, should be compensable under Article 4 of the contract. Moreover, recovery would allow equal treatment where there is a delay induced by a change for a contractor who would have delivered early and a contractor who would have delivered on the contract scheduled dates.

2. *Contract Theory*—Article 4(e) of the General Provisions of the Contract provides that "One hundred and ten per cent (110%) of the net increase in estimated cost, if any, resulting from all change cost estimates, as approved or as finally determined, shall be added to the contract price as an adjustment thereof." This clause broadly permits recovery of costs incurred by reason of a change and does not preclude award of pre-contract delivery date delay costs. As for the scheduled delivery dates, these only established the outside limits of delivery for liquidated damages purposes. They do not prescribe a right to early delivery and do not support the concept that the yard is leased for a definite time period. Article 1(b) of the Contract's Special Provisions refutes such interpretations by its provision that, upon five days notice after vessel completion, the owner must accept delivery.

3. *Precedent*—While there is precedent to support award of such costs in the event of a breach of contract or unreasonable delay, it has not been decided whether

such costs are recoverable in the absence of either event. However, the reasoning of the Court of Claims in *Metropolitan Paving Co. v. United States,* 325 F. 2d 241 (1963), a breach of contract case involving pre-contract delivery date delay, appears to be pertinent. The Court stated:

> "While it is true there is not an 'obligation' or 'duty' of defendant to aid a contractor to complete prior to completion date, from this it does not follow that defendant may hinder and prevent a contractor's early completion without incurring liability. It would seem to make little difference whether or not the parties contemplated an early completion, or even whether or not the contractor contemplated an early completion." (325 F. 2d at 242).

Logically, it is difficult to distinguish the situation where pre-contract delivery date delay is due to unreasonable conduct on the part of the Government and the situation where the Government and shipowner exercise their right to unilaterally order changes without the consent of the contractor which results in pre-contract delivery date delay and the contractor is entitled to recover "the increase . . . cost of the contract work."

4. *Circumstances of this Contract*—According to Sun, its bid for this Contract was low and was based on the expectation of early delivery in order to be profitable. Sun scheduled its work accordingly and alleges to have had the capacity to follow that schedule or some other that would have produced early delivery but for the changes.

After considering these arguments on both sides of the issue, it is our opinion and we find and conclude that these costs are legally recoverable. There seems little doubt that these costs are incurred and that a bid predicated on early delivery does not cover these costs. Conceptually, insofar as incurrence of costs, there seems little difference between delays before or after the scheduled contract delivery date, as has been recognized thus far in cases relying on breach of contract or unreasonable delay. *United States v. Blair, supra,* is distinguishable.[23] Moreover, the Contract in Article 1(b) of the Special Provisions expressly permits early delivery and in Article 4 of the General Provisions recognizes "the increase in the cost of the contract work . . . to result from such change" and as such expressly provides for recovery of these types of early delivery delay costs. We consider increased work resulting from changes to be obviously an increase in the contract work within the meaning of Article 4. We are not persuaded that permitting entitlement to these costs will result in inexorable difficulty in determining the lowest responsive and responsible bidder.

We would caution, however, that because of the problem of mutuality, the problem of notice of the early delivery date to the parties concerned, and the problem of proof of that date, such costs can only be recoverable in appropriate cases where very strong proof is offered of such early delivery date. By a strong showing of proof we intend something more than self-serving schedules of a yard. Possibly corroboration by independent experts, acknowledgement by the owner and MarAd or substantial,

23. *Blair* is distinguishable either on the ground that it merely applied the language of *Rice* to a substantially similar contract, which differs materially from the instant Contract, or on the ground that the *Rice-Blair* rule is limited to cases where the delay is due to "factors outside the Government control." *Laburnum Constr. Corp. v. United States,* 325 F. 2d 451, 458 (Ct. Cl. 1963).

reasonable actions on the yard's part in reliance on such date would constitute such proof. Also, bearing on the question of proof would be the extent to which the parties affected were apprised prior to issuance of the change that such costs would be levied against them as part of the cost of the change order.

Since we have determined that there is no broad legal bar to recovery of delay associated costs Sun claims it incurred as a result of Changes 23 and 48 we turn to the issue of whether Sun has sustained its burden of proof that it did in fact incur such costs and did incur them to the extent claimed.

III. Delay Associated Costs—Delay Costs.

The delay associated costs considered herein are delay costs and certain other costs incurred in performing unchanged work due to the changes. The delay costs claimed by Sun in its detailed estimate for the changes were labor and material escalation, financing, services, insurance, and unabsorbed overhead. The Board's Representative recommended award of $871,037, exclusive of profit, for these costs. Of this recommended award, agreement was reached only with respect to the cost of insurance caused by the changes ($15,378 exclusive of profit). Further, no exception has been taken to the recommendation that Sun's claimed financing costs were included in the unabsorbed overhead claim. Some issues remain, however, concerning these financing costs. With respect to each of the other delay costs no agreement was reached on the amount Sun is entitled to recover.

(A) *Factual Findings of Delay in Delivery.*

The exact sum for which Sun is entitled to recover for each of the delay costs requires a determination of the

exact number of days of delay in delivery of the USL vessels caused by the changes. Sun claims and the Board's Representative recommended that Sun would have delivered the USL vessels prior to the scheduled contract delivery dates but for Changes 23 and 48. Therefore, we must determine whether there was pre-contract and/or post contract delivery date delay caused by the changes.

(1) *Pre-Contract Delivery Date Delay.*

The Board's Representative concluded that but for Changes 23 and 48 each USL vessel could have been delivered 15 days prior to the scheduled contract delivery date. He was persuaded by three factors in reaching this conclusion.

First, a November 1962 building schedule, initiated by the President of Sun, projected delivery of the first USL vessel in July 1964, about 60 days prior to the scheduled contract delivery date of September 29, 1964. The Board's Representative found that this intention to delivery early, expressed one month after contract signing, was supported by the fact that Sun had to delivery early in order to maximize its opportunity to earn a profit because of its low contract price.[24] Also, the award to Sun on June 14, 1963, of the follow-on Grace Line contract for construction of four vessels at $52,600,000 provided Sun with an additional motive to expedite delivery of the USL vessels. The Board's Representative, however, recog-

24. The assumption or finding that Sun's contract price was low for these five USL vessels is apparently based on the following facts. The Chief of the Office of Ship Construction reported in a memorandum to the Secretary of the Board dated July 16, 1962, that a reasonable fixed price bid for each of the USL vessels would be $12,500,000 but that due to the competitive nature of the shipbuilding industry and past bidding experience the low bid was expected to be in the range of $10,500,000 to $11,000,000. Sun became the low bidder at a bid price of $10,590,000 per vessel. It is of interest that the next lowest bid was $10,786,000 per vessel.

nized that even absent the changes the early delivery dates contained in the November 1962 building schedule could not have been met.

The second factor that persuaded the Board's Representative of 15 days of pre-contract delivery date delay per vessel was the testimony of Mr. E. Scott Dillon, to the effect that Sun could have delivered the vessels early absent the changes. Prior to the hearing, it was Mr. Dillon's opinion that the first vessel could have been delivered at least 30 days prior to the scheduled contract delivery date absent the changes. After reviewing the discovery material and superficially studying the evidence presented at the hearing prior to his testifying, Mr. Dillon modified his opinion to suggest probable delivery of the first vessel within a range of 0 to 30 days prior to the contract date and if a precise date had to be selected, then 15 days prior to the scheduled contract delivery date. Mr. Dillon's conclusion was primarily based on his assessment that the disruptive effect of the changes could normally be expected to cause a total delay of at least 75 days for the five vessels.

The final factor that persuaded the Board's Representative was his own analysis of some of the "other events" which delayed the construction of these vessels: (1) the addendum to the Contract signed on February 25, 1963, providing for a single plane turbine engine; (2) tardiness in the preparation of engineering and working plans for an Atlantic Refining tanker, Hull 627, which delayed the engineering effort of the USL vessels; (3) 16 days of rain in April 1964; (4) inoperation of one crane in October 1963; and (5) repair work on the CUYAHOGA during June, July, and August 1964, which diverted workers from the USL vessels.

The Board's Representative concluded that these incidents substantially reduced the prospect of Sun's fulfilling its intention of delivering the vessels 60 days early. He decided that it was "not possible, or indeed proper, to conduct an independent investigation of the facts." Therefore, he accepted Mr. Dillon's conclusion that but for the changes each vessel could have been delivered 15 days prior to the contract delivery date as the "most objective, carefully considered and impregnable evidence of record."

All parties take exception to this recommendation. Sun argues that the evidence supports a finding that the changes caused an average per vessel of 75 days of pre-contract delivery date delay. Sun's position is based on 1) Sun's history of delivering MarAd vessels early; 2) the necessity to Sun of early delivery in order to make its bid competitive and the Contract profitable; 3) the November 1962 building schedule setting delivery for each vessel 75 days in advance of the scheduled contract delivery dates; 4) the motivation of the Grace Line contract to delivery the USL vessels early; 5) testimony of Sun's witnesses that Sun intended and had the capacity to accomplish the intention of delivering the USL vessels according to the November 1962 delivery schedule; 6) the changes added four months of work to the Contract. USL and Staff Counsel contend that the preponderance of evidence shows that Sun could not have delivered the USL vessels prior to the scheduled contract delivery dates even if the changes had not been made. Their position is based on some of the evidence relied on by the Board's Representative in his recommendation and on additional alleged delay factors.

We are not persuaded by either the recommendation of the Board's Representative or by Sun's position.

First, we find that Sun's intention during the early stages of the Contract to attempt to deliver the USL vessels early, as evidenced by the November 1962 building

schedule, to be of little, if any, probative value with respect to Sun's actual ability to deliver early absent the changes. We view this highly optimistic and ambitious schedule as an attempt by the contractor to set forth challenges for its staff to meet in the performance of the Contract and to provide a time cushion to protect against contingencies which might, and in fact did, arise during construction.[25] We do not believe that the dates contained in that schedule, were realistic predictions of future performance but rather were designed to provide an incentive for increased production by shipyard personnel.[26]

Second, we disagree with the unwarranted reliance by the Board's Representative on the 15 days of pre-contract delivery delay testimony of Mr. Dillon to the exclusion of the testimony of other witnesses.[27] Messrs. Hoffman, McGowan, and Lowry, all of whom were at least and probably more familiar with the relevant facts, testified that even absent the changes Sun would not have delivered the vessels in advance of the scheduled contract delivery dates. Two USL witnesses, Mr. Young and Mr. Snow, both supported the testimony of MarAd's witnesses that the vessels could not have been delivered early. Furthermore, Mr. Dillon in his testimony conceded that the vessels could have been delivered *zero* days early even absent the changes. It should also be noted that Dr. Dillon qualified his testimony because he had not made a detailed study of the production analysis reports obtained during discovery and because he was not familiar with all of the prior testimony at the hearing. Under these circumstances we think the Board's Representative erred in attaching so much significance to the figure—15 days prior to the scheduled contract delivery date—chosen by Mr. Dillon when he was urged to pick a precise date for delivery.

Third, although the Board's Representative listed *some* of the "other events" which delayed performance of this Contract he did not take into account other events which also delayed the performance of the Contract. A complete review of the record with respect to the facts concerning the delay caused by other than the changes discloses that there was delay in the engineering for these vessels both prior to and after the change orders were issued. These engineering problems were not entirely related to the changes. Sun's material procurement was "so late as to jeopardize completion on the [scheduled] contract delivery date." (Tr. A-1743). The Board's Representative concluded that the late material procurement did not affect delivery because Sun was aware of the probability of the changes and had no need to press suppliers of materials. Sun's witnesses at the hearing, however, testified that Sun did not delay material procurement because it knew of the probability of changes. Thus, we think the late material procurement is a factor to be considered in determining whether Sun would have delivered early but for the changes. Our review of the record also indicates that Sun's production effort on the Contract was adversely affected by the diversion of manpower for repair

25. Mr. Dillon stated with respect to this schedule that it "represents an optimistic schedule, one which sets forth challenges to the shop foreman and all supervisory personnel." (Tr. A-1492.)

26. Mr. Grant, a MarAd witness, testified that Mr. Hutchinson, Superintendent of Production Control for Sun, expressly told him that Sun used its schedule for this purpose. (Tr. A-1389.)

27. For example, the Board's Representative states that Mr. Lowry's testimony "failed to address itself to the possibility of any pre-contract delivery date delay." (Recommended Decision, p. 90) Yet, in reviewing the record we find Mr. Lowry testified:

> "It was my conclusion that based on the degree of progress that existed immediately prior to the authorization of the change 23 and Sun's performance on other work for the Maritime Administration and the status of material deliveries that it was unlikely that they would have delivered these vessels in advance of the contract delivery date." (Tr. A-1235.)

work. All of these factors together with the incidents considered by the Board's Representative support the conclusion of Messrs. Hoffmann, McGowan and Lowry that even absent the changes Sun could not have delivered the USL vessels prior to the scheduled contract delivery dates. In any event, it is our conclusion, on the basis of the record, that Sun has not sustained its burden of proving that it not only intended to deliver early but that absent the changes it would in fact have delivered the vessels prior to the scheduled contract delivery dates. Any deficiencies or ambiguities in the record in this regard must be resolved against Sun, the party bearing the burden of proof, and consequently Sun must bear the onus of failing to meet that burden proof.

(2) *Post Contract Delivery Date Delay*

The Board's Representative recommended that Sun was entitled to recover delay costs for the full 232 days of actual post contract delivery date delay. Deliveries of the vessels occurred as follows:

Hull	*Contract Delivery Date*	*Actual Delivery Date*	*Days Late*
629	9-29-64	11-12-64	44
628	12-13-64	1-15-65	33
630	2-26-65	4-14-65	47
631	5-12-65	6-29-65	48
632	7-26-65	9-24-65	60

The Board's Representative based his conclusion on the finding that the changes involved 75 days additional work, which was more than the amount of actual post contract delivery date delay on any of the vessels, and on the further finding that $80,800 of overtime was necessary to expedite delivery of the first two vessels. He also indicated that while deliveries of the last three vessels might have been accelerated by incurring additional costs Sun was under no contractual obligation to do so.

Staff Counsel and USL contend that the Contracting Officer was correct in allowing recovery for 209 days or a maximum of 44 days per vessel, leaving 3, 4 and 15 days of unexcused delay for the last three vessels respectively. Staff Counsel argues that it is well established that there is a "learning curve" in the production of successive vessels and therefore, the last vessels should have been delivered sooner. He also contends that Sun's decision to devote manpower to the CUYAHOGA repair project diverted labor from the USL vessels and that Sun's decision to delay the start of construction of the last two vessels delayed their delivery. Such conduct, it is argued, demonstrated a lack of due diligence in the construction of the last two vessels.

We reject these contentions and adopt the finding of the Board's Representative that Sun is entitled to recover delay costs for the entire post contract delivery date delay period. We note that construction of the first two vessels entailed a total of 16¾ and 20 months from keel laying to delivery respectively; the third vessel 21¼ months; the fourth vessel 16½ months; and the fifth vessel only 15¾ months. Thus, the shorter construction time for the last two vessels clearly reflects the effect of the learning curve. The reason why these vessels were delivered later than the first vessel was a decision by Sun to delay keel laying for the last two vessels. This decision was made for two reasons: 1) the difficulties experienced in installing the changes-related equipment through the double bottoms encountered in the first three vessels induced management to delay the keel laying of the last two vessels to prevent this problem from arising; and 2) a desire by Sun to lessen the additional amount of services required by the last two

vessels and thereby lessen the expenses caused by the changes. Thus, the delay in the keel laying of the last two vessels was designed to reduce changes-caused expenses and was not due to lack of due diligence on the part of Sun.

While we agree with Staff Counsel that the diversion of manpower to the repair work on the CUYAHOGA significantly impaired Sun's ability to perform on the USL Contract, we have already taken this factor fully into account in denying Sun's claim for pre-contract delivery date delay costs. Therefore, we do not believe that Sun's recovery for post contract delivery date delay should be reduced because of the diversion of manpower due to the repair work.

Accordingly, we agree with the Board's Representative that Sun's recovery of delay costs should be based on the full 232 day period of post contract delivery date delay.

B. *Costs of Delay.*

(1) *Labor Escalation.*

This issue concerns the increased labor cost to Sun of performing unchanged work in a later time period due to the changes-caused delay. There is no dispute that under Sun's collective bargaining agreements labor costs escalated during the period of the Contract and that Sun did perform a number of labor hours on the "unchanged" work in higher wage periods as a result of the changes-caused delay. The dispute centers on the time in construction when changes-caused labor escalation occurred, the exact number of labor hours expended in higher wage periods due to the changes-caused delay, and the appropriate total contract labor input to be used in the labor escalation formula.

The Board's Representative found that delays were caused to both non-outfitting and outfitting production. Therefore, he concluded that Sun should recover $72,185 for labor escalation computed by using both outfitting and non-outfitting labor hours and the 15 days precontract delivery date delay plus the actual post contract delivery date delay for each vessel.

Staff Counsel takes exception to this recommendation of the Board's Representative contending that the changes-caused delay occurred during and not prior to performance of outfitting work and that the delay to pre-outfitting work was due to causes under Sun's control and not to the changes. Hence, Staff Counsel argues that it was error to accept Sun's formula which applied Sun's wage increase trends to a *total* contract labor input of $28,600,000. Further, Staff Counsel argues that even assuming the changes threw performance of pre-outfitting labor into a later time period, the recommended award of the Board's Representative should be reduced by $18,000 to reflect Sun's optional undertaking of repair work on the CUYAHOGA which resulted in a diversion of manpower from USL ships of 200,000 manhours and also by an additional $18,000 to reflect the actual total contract labor input of $22,133,000 rather than Sun's estimated $28,600,000. USL relies on Staff Counsel's exceptions.

We agree with the Board's Representative that both pre-outfitting and outfitting work were affected by the changes. Change 23 was approved on May 31, 1963, before outfitting took place on the first vessel. It is not clear exactly when outfitting first occurred, but Staff Counsel has maintained it was not until the time of launch which was on May 13, 1964, for the first vessel. Certainly by that time outfitting was significantly occurring. The exact scope of Change 23 was not settled until long after

May 1963 and the engineering for both changes was not settled until May of 1964. Even assuming the changes only directly affected outfitting work it is apparent that once Sun became aware that the changes would cause some delay in delivery of the vessels it had to readjust its already scheduled construction sequence affecting pre-outfitting work in order to deliver the vessels as timely as possible and in order to reduce the overall cost of both the changed work and basic contract work. Otherwise, the unchanged work would have proceeded at the originally scheduled pace and the changed work at the delayed pace, most likely producing even greater disruption and delay in delivery of the vessels than actually occurred.

We consider that Staff Counsel's contention that the recommended award should be reduced because of the failure to consider the effect of Sun's optional undertaking of repair work on the CUYAHOGA is relevant to the number of days of changes-caused delay subject to labor escalation. In denying Sun's factual claim for pre-contract delivery date delay, we fully took into account the diversion of men to perform repair work on the CUYAHOGA. Therefore, this factor is taken into account in our determination of 232 days of changes-caused delays. The Board's Representative based his award for labor escalation on utilization of a delay period of 307 days—75 days of precontract delivery date delay and 232 days of actual post contract delivery date delay. Since we have decided that there was no precontract delivery date delay, the award for labor escalation must be reduced by 75/307 or 24.4 percent.

We agree with Staff Counsel's contention that Sun's formula improperly utilized a figure for total contract labor input of $28,600,000. That figure improperly included allocation of all overhead expenses, including cost

of rent, depreciation, electricity, insurance, etc. An actual audit demonstrated that the total direct labor input to the Contract was only $17,163,000. Indirect labor was established at the hearing as being equal to 29% of direct labor or approximately $4,970,000. Thus the total labor input which would be subject to escalation was only $22,133,000. On this basis, the Board's Representative overstated the amount of labor subject to escalation by approximately $6,500,000. As calculated by Staff Counsel under the formula for labor escalation this overstatement requires a reduction of $18,000 in the recommended award of the Board's Representative.

Accordingly, the award of $72,185 for labor escalation must be reduced by 24.4 percent because of our denial of the claim for precontract delivery date and by $18,000 for the use of the improper amount of labor input. Therefore, we award the sum of $38,111.86 for labor escalation.

(2) *Material Escalation*

The Board's Representative recommended award of $82,125 for material escalation. He based this award on the $22.5 million value of material which Sun claimed it purchased late because of the changes. Although the total amount of materials purchased under the Contract was valued at $27.5 million, Sun claimed that material committed by suppliers prior to the changes was valued at only $5 million. The Board's Representative accepted Sun's method of computation based on the application of the increase in the wholesale price of metals and products index to the $22.5 million dollar figure for the period of the delay.

Staff Counsel, supported by USL, raises several objections to this finding of material escalation. Staff Counsel notes that Sun submitted no evidence of material es-

calation except for its citation of the wholesale price index. No attempt was made by Sun to prove that material procurement was thrown into a later time period because of the changes and that increases in the prices of the material required for the vessels did in fact occur. Sun did not introduce a single invoice or purchase order showing that the price of any item increased during the period of delay caused by the changes. Indeed, Sun's President, Mr. Atkinson, testified that Sun did not delay the purchase of material when it learned that the changes would be directed. (Tr. A-2353.) Moreover, Mr. McGowan, Chief of the Division of Estimates at MarAd, testified that the cost of much of the steel was not subject to escalation because it was purchased at the same time it would have been purchased absent the changes and the cost of the main boilers and engines were not subject to escalation because the costs of these items were committed before the changes were authorized. (Tr. 639, 640).

Finally, Staff Counsel argues that as for material directly related to the changes, the increased cost of such material has been included in the award for hardware. The $950,000 which was agreed to by the parties as the added material cost for the five vessels required by the changes actually covers material purchase orders and subcontracts having a total value of approximately $10 million. Therefore, Staff Counsel contends no escalation should be awarded for this material.

We agree with Staff Counsel and USL that Sun's failure to introduce material procurement records to prove what material escalation, if any, in fact occurred constitutes a failure to sustain the burden of proof. Indeed, under these circumstances where direct proof of material procurement records was available, reliance on the wholesale price index represents a classic example of the failure

of a litigant to satisfy the requirement of the burden of proof. We cannot accept Sun's uncorroborated assertion that material escalation occurred and that the wholesale price index is the correct measure of that escalation in view of Sun's failure to introduce any affirmative evidence and the contrary testimony by Mr. McGowan. Accordingly, we deny Sun's claim for material escalation for its failure to sustain its burden of proof.

(3) *Services.*

The Board's Representative awarded $172,349[28] for additional services performed during the changes-caused delay period including such items as crane service, cleaning and caretaking, temporary lights, and water and air services. The Board's Representative based this award on the following computation: the number of days delay (7⅔ months) x 3500 hours per month x $5.78 per hour labor cost. His computation of the number of delay days for this item was based on his finding of 15 days pre-contract delivery date delay plus the actual post contract delivery date delay for the first three vessels and the agreement of the parties that construction time for the last two vessels was only extended one month because of the changes.[29]

28. Although the Board's Representative in his Recommended Decision awarded $159,210 for services, Staff Counsel in his computation of the award based on that decision pointed out that because the Board's Representative disallowed part of the claim for production labor for installing electrical cable the service amount contained in the hardware claim must be reduced by $13,139 and this amount added to the award for services during the delay period. The Board's Representative in his Recommended Order accepted this suggestion.

29. Keel laying for the last two vessels was delayed by management in order to reduce expenses, *supra* at pp. A79-A80. Thus, construction time for the last two vessels was decreased. Since services are a function of construction time, only one month of additional services was necessary for each of the last two vessels.

The 3500 hours per month was based on Sun's estimate of 3500 hours of additional services per month. It was derived from a "combination of accounting records and other information" and allegedly reflected a deduction for the service increment contained in the basic hardware claim. The Board's Representative rejected Staff Counsel's contention that only 1870 hours per month should be allowed for additional services based upon the lowest number of hours per month actually experienced for crane service, cleaning and caretaking, and temporary lights, air and water service. He stated that Staff Counsel's reliance on the *minimum* rather than the average number of hours did not seem to be fair and reasonable.

Staff Counsel argues that the Board's Representative erred in his acceptance of Sun's unsubstantiated claim that total services averaged 5000 man-hours per month. (Sun reduced this amount to 3500 hours in its claim to take into account services claimed as part of the hardware claim.) Staff Counsel urges that based on Sun's own records the service averaged did not exceed 3,720 man-hours. Staff Counsel also asserts that both Sun and the Board's Representative did not deduct enough hours from the service average to take into account all the services which are not time oriented and, therefore, are not affected by the delay. Such services include crane service to fabricate and erect steel hulls which depends on the quantity of steel and not time, the installation and removal at the completion of construction of temporary lighting, piping and ventilation, and the cleaning of ship tanks, cargo holds and accommodation space, prior to delivery of the ships. Staff Counsel concludes that when appropriate deductions are made to reflect the exclusion of these services, Staff arrived at the figure of 1870 hours per month per vessel.

Since Staff Counsel contended that the additional construction period during which additional services were rendered was six months, Staff Counsel arrived at the following calculations for additional services:

6 months x 1870 hours x $5.68 per hour = $63,729.60. From that figure Staff Counsel deducted $30,625 for the dollar amount of the services contained in the hardware award. Therefore, Staff Counsel concludes that Sun is entitled to only $33,104.60 for additional services due to the delay. USL relies on Staff Counsel's argument in its exception.

We agree with Staff Counsel that Sun and the Board's Representative have inflated the amount of hours of additional services per month provided during the period of delay by Sun because they rely on a base of an average of 5000 service hours per month whereas actual audit returns reveals a figure closer to an average of 3700 such hours. On the other hand, we agree with the Board's Representative that Staff Counsel's use of the figure 1870 hours per month is unrealistic because, as Staff Counsel argued before the Board's Representative, it is based on the minimum amount of hours of additional service. Accordingly, and in the exercise of our best judgement, we have decided to increase Staff Counsel's figure by one-third to 2500 hours per month which we believe to be a fair and reasonable evaluation of the amount of hours per month of additional services rendered by Sun.

Based on our prior determination that there was no pre-contract delivery date delay, we find that for purposes of additional services the delay period for the first three vessels was the actual post contract delivery date delay or a total of 124 days. We accept the agreement of the parties that construction of the last two vessels was extended by only 30 days each because of the delay. Thus,

the delay period during which additional services was provided was 184 days or 6 and ⅛ months.

Therefore, the following computation is used to derive our award for additional services:

6⅛ months × 2500 hours = 15,313 hours
15,313 hours × $5.676 per hour = $86,916.59

From which amount there must be deducted $44,589.52 awarded for services in the hardware award. Accordingly, we award $42,327.07 for additional services.

(4) *Financing.*

The Board's Representative denied Sun's claim of $51,875 as its cost of financing due to the delay caused by the changes. The claim was based on the Government's delay in payment of the contractual five per cent holdback until delivery which was delayed by the changes. The Board's Representative based his denial of the claim on the ground that the cost of financing is included in unabsorbed overhead. No party takes exception to this decision.

Staff Counsel, however, points out that the *hardware* claim contained $101,500 for cost of financing due to the delay in payment of the hardware costs by USL and MarAd and that this amount should be deducted from the award for hardware based on the same rationale used by the Board's Representative for denying financing costs in performing unchanged work.

We agree with Staff Counsel that this amount should be deducted from the hardware claim. Our reason is that Sun's present claim for these costs is actually an attempt to recover interest under another name. In a document entitled "Time/Magnitude Relationship of Sun Ship's Cost" which was filed by Sun after oral argument before the Board's Representative at his request Sun states that these financing costs

> "were estimates to assess the financial impact of not being paid for the changes within a reasonable period of time. *These amounts have now been removed from the direct claim since they no longer reflect the elapsed time.*" (Emphasis added.)

Sun substituted for the removed costs a claim of $1,515,000 for these "costs from 1965 through 1970." Sun's unabsorbed overhead claim does not cover that time period; however, we view the claim of $1,515,000 (subsequently substantially increased) as an attempt to recover interest which we discuss in Part V.

Since Sun has conceded that the sum of $101,500 for cost of financing is no longer part of its direct claim, we find and conclude that that sum must be deducted from the hardware claim.

(5) *Unabsorbed Overhead.*

Because Changes 23 and 48 delayed delivery of USL vessels beyond scheduled contract delivery dates, Sun incurred "continuing or fixed" overhead costs during the changes-caused delay period for which it was not compensated by the fixed price Contract. Continuing or fixed overhead costs are, according to Sun's accountants, the essentially time-oriented costs of having a facility available to do business at a determined level. They include property taxes, depreciation, the management, and certain outside services. Sun claims that it is entitled to recover, as a cost of performing the changes, those continuing overhead costs (hereinafter referred to as "unabsorbed overhead") incurred during the delay period for which it will not receive compensation from the continuing cost portion of the overhead rate applied to the changed work in the hardware section. To compute the unabsorbed overhead

Sun has advanced a daily rate method formula that is a function of time. It argues that its normal method of allocating overhead costs to direct labor costs does not cover a delay period when there is either no direct labor or reduced direct labor being applied. The daily rate formula is as follows:

> 1. Continuing overhead attributable to non-hull production is subtracted from the total continuing overhead for the entire yard producing continuing overhead attributable to new hull production.
>
> 2. The latter is divided by the number of new hulls normally produced per year × 365 days producing continuing overhead (new hull)/vessel days.
>
> 3. This figure is multiplied by the vessel days delay due to changes to produce the continuing overhead due to changes-caused delay.
>
> 4. The continuing overhead absorbed by Sun's hardware claim is subtracted from this result to produce the continuing overhead recoverable as a cost under the contract changes clause.

With respect to Sun's claim for unabsorbed overhead the Board's Representative recommended:

> "Approximately $356,000 [corrected to $529,000 in Recommended Order] recommended for unabsorbed overhead based upon 307 days of changes-caused delay by application of daily overhead rate formula endorsed in decisions of Court of Claims and Armed Services Board of Contract Appeals . . . ."

This recommendation was based on a determination that Article 4 of the General Provisions of the Contract is authority for recovering such cost. Sun takes no exception to this recommendation except as it incorporates a finding of 307 days of changes-caused delay rather than 607 days. USL and Staff Counsel take numerous exceptions to this recommendation. They deny that Sun incurred any unabsorbed overhead on this Contract. USL adds that if there were unabsorbed overhead, Sun had to prove and failed to prove it sustained a loss of business. Staff Counsel adds that if there were unabsorbed overhead, the daily rate formula is limited in its application to exclusively reserved facilities of Sun. USL apparently argues further that if the daily rate method is utilized as Sun proposed the element therein of "number of new hulls normally produced per year" should be Sun's normal capacity rate of six hulls per year rather than Sun's actual production rate of five hulls per year.

The contention that Sun incurred no unabsorbed overhead on this Contract is based upon testimony and evidence sponsored by Mr. Max Stavis, Chief of Audits Branch, Eastern Region Office of MarAd, that Sun's annual composite overhead rate declined during the contract performance period both because of an increase in the application of direct labor in such facilities as rocket fabrication and because of a decrease in overhead or indirect labor costs as compared with the preceding period of time. Staff Counsel cites as support of this argument a commentator on accounting and defense contracts.[30] That commentator in speaking of *Lite Mfg. Co.*, ASBCA No. 4755, noted the argument advanced by Staff Counsel and commented:

> "This opinion [on reconsideration] supported the Board's view in its original decision wherein the point was made that the question involved is not whether

30. Trueger, Accounting Guide for Defense Contracts 304 (5th ed. 1966).

overhead rates had or had not increased as a result of delays. Rather, the point at issue is whether the time of performance of the contract had been prolonged. *Where it can be proven that the time of performance is prolonged through the Government's action, and where the overhead expenses do continue, the Board found that, of necessity. . . . more of such expenses were incurred during the period of performance than would have been except for the suspension.*" [31] (Emphasis added.)

This dispute involves a delay of work rather than a suspension of work, but the point is the same. The argument that the annual composite overhead rate declined is essentially irrelevant to ascertaining the occurrence of unabsorbed overhead in this instance where the changes directed by USL and MarAd delayed performance of the Contract beyond the scheduled contract delivery dates into a period when continuing overhead costs were incurred. In other words, without the delay of the changes the annual composite overhead rate would have declined further.

USL argues that Sun must prove it sustained a loss of business, which USL asserts has not been proven, in order for Sun to recover unabsorbed overhead. This position was advanced by representatives of Price Waterhouse & Co. who testified as USL's witnesses on this matter. The premise of this position is that there is no inherent right to recover overhead costs from an accounting viewpoint because absent other business a contractor ordinarily incurs continuing overhead costs at the end of the delayed contract or at the end of other contracts it presently has. If no additional contracts or business were acquired, the time

31. *Id.* at 404-05.

period for incurring those continuing costs normally so absorbed by the contractor would be shifted in the case of a changes-caused delay to the delay period of this Contract. Sun does not identify any specific business it lost during this time period but instead retorts that USL's position is absurd in that 1) the delay in this instance occurred not during a complete stoppage of work but during a time period that can not be precisely ascertained, 2) the exact length of the delay period is determined long after the Contract is performed, and 3) due to the long lead time involved and the sheer size of the work force and the shipyard facility it is not possible to instantly accommodate a delay. At the hearing Sun also argued that new vessel construction work succeeded the USL Contract but that it would be contrary to common sense and sound accounting practice to allocate the overhead in question to those contracts when caused by changes under the USL Contract.

We agree with the recommended position of the Board's Representative on this point. He recommended such costs were an increased cost caused by changes compensable under Article 4 of the General Provisions of the Contract as part of the 110% cost recovery under that clause. Therefore, the premise of the loss of business argument—that there is no inherent right to recover those unabsorbed overhead costs—is inopposite in this instance where the costs arise from changes-caused delay. Even absent Article 4 a contrary decision would be completely at odds with the situation presented. In this instance, Sun was proceeding on several contracts at the time of the changes and the exact delay period will not be determined finally until this final decision. To require Sun under those circumstances to comply with the loss of business argument would subject Sun to contracting for additional work during the "delay" period, which USL and MarAd would

probably legitimately argue unavoidably delayed performance on the USL Contract.

The other principal argument raised against the application of the daily rate formula in this instance is Staff Counsel's argument that the formula should be limited in application to on-site construction work or in this instance to these facilities exclusively reserved in Sun's shipyard for the USL vessels during the changes-caused delay period.[32] Since Staff Counsel contends the changes-caused delay occurred post-launch this position limits the delay rate formula to use of the wet basins. The point of this argument is that a delay to an exclusively reserved facility entails the idling of that productive facility, which is then set aside and not devoted to other work. Delay to a jointly used facility, however, while reducing progress on the USL project would not preclude other projects in that facility from more productively using the facility, the net result being no idling of the overall jointly used facility. Staff Counsel adds that for a jointly used facility, it is not logical to compute unabsorbed overhead attributable to changes-caused delay because the overhead expenses attributable thereto are accounted for in an indivisible overhead pool from which overhead expenses are allocated on a pro rata basis to the direct labor dollar level for all the various contracts for a given accounting period. Sun replies that it is factually ludricrous to contend, in effect, that Sun did not reserve a substantial part of its facilities for performance of this five vessel, 34 month, $52 million Contract.

32. Staff Counsel's exclusively reserved facilities argument is discussed separate from USL's loss of business argument solely for purposes of convenience. It is recognized they are not mutually exclusive. The preceding discussion on the loss of business argument was not intended to cover any requirement to demonstrate reserved facilities in connection with a claim for unabsorbed overhead.

Staff Counsel's fundamental position, that Sun must demonstrate that its facilities or a portion thereof were reserved for performance of the USL Contract during the change-caused delay, is a prerequisite to recovery of unabsorbed overhead under the cases he cites.[33] We consider that Sun has met that burden. During construction in Sun's shipyard from 1963 through 1965 new vessel construction contracts, such as that for the USL vessels, were usually significant projects requiring construction of specially designed vessels. To accomplish that construction, the overall vessel construction program at the yard for any given time period required a complex schedule of sequential, orderly construction. Hence, a changes-caused delay initiated seven and half months after contract signing for construction of five USL vessels required a significant portion of the work force and jointly used facilities of the shipyard to be tied up and not transferable to work for other contracts.[34] Since we are not persuaded by the exceptions of USL and Staff Counsel to employment of the daily rate method formula for calculating Sun's claimed unabsorbed overhead costs, we proceed to consideration of that formula.

33. *E.g., Walter Motor Truck Co.*, ASBCA No. 8054, 66-1 BCA par. 5365; *Fletcher Aviation Corp.*, ASBCA Nos. 7669 and 8542, 65-1 BCA par. 4651.

34. None of the cases cited by Staff Counsel require that a jointly-used facility which is in part tied up because of changes-caused delay be not considered for purposes of a claim for unabsorbed overhead. To the extent the question has been considered by administrative bodies, the indication is that such facilities may be considered. *E.g., Wright Co., Inc.*, ASBCA No. 7211, 1962 BCA par. 3432 ("Whether the proportion set aside is physically segregated or merely a portion of capacity is immaterial.") The principal cases relied on by Staff Counsel, *Fletcher, supra* and *Todd Shipyards Corp.*, ASBCA Nos. 123[illegible] and 1234 (1953), concerned delay in commencement of work. They required contractors to demonstrate that they had reserve any of their facilities during the delay period, a requirement with which we consider Sun has complied.

The daily rate method formula was recommended or accepted by Lybrand, Ross Bros. & Montgomery, Arthur Anderson and Price Waterhouse & Co., as fairly calculating the unabsorbed overhead costs caused by the changes-induced delay and has been endorsed by the Armed Services Board of Contract Appeals in equitable adjustment proceedings.[35] Only one exception has been taken to the interpretation and application by the Board's Representative of that formula, and that is USL's assertion that Sun's normal capacity rate of six hulls per year should be employed rather than Sun's actual production (delivery) rate of five hulls per year.

Aside from semantic differences between a "capacity" rate and a "production" rate this controversy over "the number of new hulls produced per year" concerns whether the measurement is the normal ability of the yard to produce hulls (capacity rate) or whether historically it is the hulls the yard has normally produced (production rate). While the production rate is perhaps closer to the literal language of the proferred daily rate formula, we do not consider it fair and reasonable that USL and MarAd should be subjected to the vicissitudes of Sun's past experiences. A fairer and more reasonable measure is the use of a normal capacity rate which may or may not be greater or less than the historically based production rate.

USL asserts that a six hull capacity rate was normal for Sun's yard during the period 1963-1965. This position is based on observations at Sun's yard, a determination that Sun could physically accommodate nine hulls in its yard, and a consideration of Sun's previous experience. USL points out that in 1965 Sun's yard actually exceeded a six hull capacity. None of the other parties directly addressed this issue, but we note that the conclusion of the Board's Representative on which hulls were to be included

35. *Eichleay Corp.* ASBCA No. 5183, 60-2 BCA par. 2688.

for purposes of this issue was the same as that urged by USL and used in its six hull capacity rate. Sun did not take exception to that conclusion of the Board's Representative. We therefore will use 6 hulls as representing "the number of new hulls produced per year" element of the daily rate method formula.

Finally, consistent with our discussion of and decision with respect to labor escalation *supra* and production disruption and congestion *infra*, the number of delay days assumed in the formula must be changed to reflect some delay in 1963. We think a fair allocation of the delay days would be in proportion to the total proportion of construction days in 1963 through 1965 for the five USL vessels commencing with the Board's approval of Change 23 on May 31, 1963. We calculate in round numbers 580 total construction days for 1963, 1580 for 1964, and 570 for 1965 or 21.24%, 57.88% and 20.88% respectively, for 1963 through 1965.

On this basis, under the formula contained in Sun Exhibit 74 discussing computation of unabsorbed overhead for USL vessels and substituting the delay period caused by the changes determined herein, the hull days per year utilized in USL Exhibit 33, and the allocated delay for 1963 through 1965, Sun is entitled to recover approximately $ for unabsorbed overhead.

IV. Delay Associated Costs—Disruption, Congestion, "Hire-Fire," and Overtime.

As previously noted, Sun in its detailed estimate claimed that it incurred the above-described costs in performance of unchanged work due to Changes 23 and 48. The parties are in agreement that Sun is entitled to $80,800 (exclusive of profit) for the asserted overtime or acceleration costs. USL and Staff Counsel would allow no recovery whatsoever for the remaining disputed dis-

ruption, congestion and "hire-fire" costs totalling $451,072 under the Recommended Order, except that Staff Counsel agrees to $59,850 for engineering disruption.

A. *Engineering Disruption.*

The Board's Representative recommended that Sun's total engineering disruption claim of 9000 hours or $59,850 be awarded. This recommendation was perhaps influenced by the conclusion of the Board's Representative that the Contracting Officer's final decision intended to allow this item. In any event, the recommendation was also based on a review of the evidence:

> "A review of the evidence convinces that Sun did in fact suffer considerable engineering disruption, not only as a result of the novel automation change which represented a substantial advance in the state of the art, but also through the successive changes in the quarters arrangement, including the unsuccessful proposed elimination of the hospital, the redesign of the galley and the re-addition of quarters for two crewmen originally thought to have been eliminated by Union agreement. The stop-revise-go experience on these changes had a disruptive effect upon the total productive effort." (Recommended Decision, p. 40.)

USL takes exception arguing, "There is absolutely no evidence that engineering disruption occurred involving *unchanged* plans." It contends that, the Contracting Officer's intention to include engineering disruption is irrelevant and that the plans affected by the so called "novel automation change" and the plans affected by the successive changes in the quarters rearrangement and related areas were all included in its experts' estimates of engineering in the basic hardware claim.

Since the recommendation of the Board's Representative includes his independent review of the record, the

recommendation will be considered only on that basis and will not be limited to interpreting the possible intentions of the Contracting Officer's final decision. Our own review of the evidence confirms the report of the Board's Representative that "the changes had a disruptive effect upon the total productive effort." These changes commenced on May 31, 1963, seven and a half months after contract signing and the details of engineering were not settled until a year later in May 1964 after a tortuous stop-revise-go routine. We have determined hereinabove that approximately 50,000 hours of engineering were added by the changes or 20 to 25% of the entire engineering effort expended after Change 23 was authorized. Since Sun's engineering staff was not unlimited, this magnitude of the engineering effort generated by the changes perforce required that the unchanged plan work was performed out of sequence to accommodate, as best as possible, the changes engineering effort. This was confirmed independently by the testimony of the Staff who compared the engineering labor of this Contract to other similar projects and concluded that Sun incurred the engineering disruption it claimed. USL presented no evidence that really brought into question Sun's claim for engineering disruption. We are satisfied, therefore, that Sun, with the assistance of the Staff, has carried its burden of proof that it is entitled to recover its claimed 9000 hours of engineering disruption caused to unchanged work by Changes 23 and 48. Based on its engineering labor rate and the 72% overhead rate determined herein Sun is entitled to recover $58,824.

B. *Production Disruption and Congestion.*

We consider production disruption and congestion costs together. We are aware that Sun claimed them

separately and that the Board's Representative considered them separately. We are also aware that conceptually these costs can be separated. Production disruption is the impact of Changes 23 and 48 to unchanged work in failing to be able to proceed in a normal, orderly sequence of work. Congestion is the cost impact of Change 23 to unchanged work resulting from working in a space either restricted by housing too many people at the same time or by being reduced in area due to additional equipment. Even conceptually, however, these costs overlap because the out of sequence work may also be performance of work in a restricted space. In actual practice, these costs apparently do overlap or become impossible to distinguish. For example, Sun's witnesses in testifying often grouped these costs together or used them interchangeably. Also, Sun's post hearing brief treated these costs together apparently because the areas in which these costs were claimed to have been incurred largely overlapped. Therefore, production disruption and congestion costs have been combined in our consideration.

The recommendations of the Board's Representative in regard to these costs are as follows:

> "Production disruption costs in the amount of $100,000 allowed for first vessel launched 75 days late due to changes. However, no such allowance authorized for succeeding vessels launched after engineering problems resolved . . . ."
>
> ". . . Sun's claim of $84,677 for changes-caused congestion in unchanged work found insufficiently documented. $25,000 allowed for first vessel only . . . ."

These recommendations were based on the conclusion that some degree of production disruption and congestion occurred as a result of the novelty of automation and that

the magnitude of the changes authorized 7½ months after contract signing was not finally settled in detail until May 1964. These recommendations also must have relied, to some degree, on the contentions of Sun with respect to the existence of production disruption and congestion in the unchanged work. These contentions were summarized by the Board's Representative as follows:

> ". . . Sun contends that the general unavailability of working plans prevented production labor from proceeding in a proper and orderly sequence and left many workers literally standing around waiting for necessary instructions. In the case of automation, the new plans were very late and their novelty rendered it more difficult and time-consuming to convey proper instructions to yard supervisory personnel; material ordering and expediting functions were delayed; conventional material specifications were rendered obsolete; vendor confusion was considerable; and material procurement, storage and movement adversely affected.
>
> Installment of the foundation for the redesigned . . . console in the first full was difficult because its delivery, three to four months late, required Sun workmen to maneuver the foundation through an opening in the forward hold. Similarly, installation of steam supply lines and steam condensate returns for heating coils in the fuel and cargo tanks had to be run through the double bottoms instead of above deck. This placed additional piping in the double bottoms impeding workmen entering to perform unchanged work. Secondly, there developed a need to relocate original piping unrelated to the change in the presence, or out of the way, of the steam lines.

> Sun maintains that the lay-offs required by the production disruption also had a drastic morale effect on the remaining workers reducing productivity." (Recommended Decision, pp. 60-61.)

With respect to Sun's method of computation for these costs,[36] the Board's Representative rejected it as too theoretical, too unrelated to the relevant facts, and "unsupported in fact or reason." Particular exception was taken to Sun's presentation of congestion. In lieu of Sun's method of computation, it was reasoned that production disruption and congestion were limited to the first vessel because the first vessel was delayed 75 days in launching till May 13, 1964; the second vessel was launched July 7, 1964, by which time the engineering problems of the changes had been resolved (May 1964) and time remained to smooth out production problems before launch; and it was Sun's practice to schedule transfer of its production crews from vessel to vessel on a 60-75 day sequence. The claim was then considered "as would a jury" and $100,000 for production disruption and $25,000 for congestion for the first vessel was recommended to be awarded as compared to Sun's claim of $239,292 for production disruption and $38,148 for congestion for the first vessel.

Sun takes no exception to these recommendations, but USL and Staff Counsel argue that no amount should be awarded for these costs either because Sun did not experience these costs or because it failed to carry its burden of proving it incurred these costs as a result of the changes. They cite testimony presented that when the console foundation was installed 80% of production labor in the

36. Sun applied a decreasing factor percentage for each succeeding hull against affected production hours or affected electrical and mechanical hours to derive the hours claimed for each hull for production disruption and congestion which was then multiplied by the labor and overhead figure of $5.78.

engine room had been completed, that the electrical work connected with the console was not exceptionally difficult, that Sun was experiencing "serious material shortages" prior to the changes, that Sun was late in its initial development of plans, and that a USL construction representative observed no congestion in the double bottoms. They also argue that there was no proof of the novelty of the automation change, that Sun failed to produce any "obsolete" material specification or material procurement schedule, that shipbuilding practice would indicate the related unchanged work in the double bottoms would have been completed long before the steam lines were installed, that the lay offs complained of were not proven to have been caused by the changes, that Sun applied its manpower normally until 1964 as shown by a MarAd manpower curve, that with respect to congestion the extension of time of 209 days removed any basis for that claim, that Sun failed to account for its own inefficiency affecting unchanged work, and finally that the Board's Representative confused disruption and congestion to changed work with disruption and congestion to unchanged work.

We are persuaded that Sun has proven it incurred some changes-caused production disruption and possibly congestion to unchanged work, although the evidence is by no means overwhelming. The special installation problems of the console foundation on the first vessel prevented outfitting to unchanged work from proceeding in an orderly fashion around the access opening and in the engine room. The disruption to "unchanged" engineering, which Staff Counsel concedes and which we herein find, undoubtedly had an adverse disruptive effect on the "unchanged" production labor that was proceeding or trying to proceed at the same time as the engineering. Further, the installation of additional steam lines in the double bottoms obviously increased the difficulty in working on

unchanged work in that area, and we are not persuaded that no unchanged work occurred or should have occurred at the time of or after installation of such steam lines. Sun, however, has not carried its burden of proof that problems related to material procurement were the result of changes and not other causes. Apparently, the Board's Representative gave no credence to Sun's claim of disruption due to layoffs and since Sun has requested separate, additional "hire-fire" costs we will consider that issue under the "hire-fire" section hereinafter. The Staff's manpower curves do not support a finding that no changes-caused production disruption and congestion occurred to unchanged work in view of the other evidence to the contrary.[37] With respect to congestion in particular, while a time extension theoretically could remove the basis for congestion it cannot eliminate the problem of a space restricted by additional equipment. Also, as a matter of practicality, the shipbuilder must proceed not knowing the time extension, if any, to which it is entitled.

With respect to the *extent* of changes-caused production disruption and congestion to unchanged work that Sun incurred, there is a paucity of evidence either as to the extent for any given area such as in the double bottoms or as to total production under the entire Contract. We agree with the Board's Representative that Sun's

37. The Staff's manpower curves, which are an exhibit to Staff Counsel Exhibit L, consist of a comparison of the work performed under this Contract to a schedule of what the work should have been. The schedule was compiled from experience under other new vessel construction contracts with MarAd. They show that manpower was applied normally on the USL vessels until May 1964. These curves were apparently instrumental at the level of the Contracting Officer's decision. This evidence was not seriously pursued at the hearing. Without knowing the judgments involved in the scheduled curves to a greater degree than appears in the record we have no means nor would the Board's Representative have any means of evaluating this evidence.

method of computation must be rejected as too theoretical and as unproven in fact or reason. We cannot agree that any award for such production disruption and congestion must be restricted completely to the first vessel. That conclusion of the Board's Representative is predicated on an assumption that the production disruption and congestion to unchanged work related to outfitting or work performed at the time of outfitting, an assumption to which no apparent exception has been taken. However, the overlapping, staggered nature of engineering and production labor and the existence of engineering disruption affected production labor preceding outfitting on at least the first two vessels. Moreover, the steam lines in the double bottoms had to be installed in the first three vessels after the keels were laid, thereby requiring additional workmen in the double bottoms which interfered with other workmen and caused problems to other lines already installed. There is no evidence, however, other than total conjecture, of any production disruption and congestion in unchanged work occurring to the last two vessels. Therefore, we conclude that most of the changes-caused production disruption and congestion to unchanged work occurred to the first vessel, due to its special problems and due to the fact that most of the affected unchanged work was outfitting, and that a small amount of such production disruption and congestion occurred to the second vessel and a lesser amount to the third vessel. The Board's Representative recommendations of $100,000 for production disruption and $25,000 for congestion on the first vessel are based solely on the jury verdict approach. No basis is given for those particular amounts. Even assuming there is an unexpressed, reasonable basis for the recommendations, it is difficult to verify. One problem is that in relation to Sun's claim of $239,292 for production disruption and

$38,148 for congestion the Board's Representative, peculiarly, recommended a greater proportionate amount for congestion than for production disruption even though he concedes Sun's presentation for congestion is even more abstract than for production disruption. Another problem is that the discussion in the Recommended Decision does not particularly distinguish between changed and unchanged work so that we are concerned that the recommendations may have included production disruption and congestion to changed work. We are further concerned that the recommendations appear not to have taken into account at all the possible overlap of Sun's production disruption and congestion claims. A final problem is the uncertainty of which areas of alleged production disruption and congestion to unchanged work the recommendations encompass.

Under these circumstances it is difficult to state with precision the amount to which Sun is entitled to recover for these costs although we are persuaded that Sun is entitled to recover some amount. This dispute has unfortunately been a subject of controversy in this Agency for close to six years. We would consider it a frustration of justice, therefore, to remand this dispute on this issue if we can determine some approximate fair and reasonable amount to which Sun is entitled to recover. Therefore, we feel compelled to again exercise the jury verdict method previously discussed. Taking all the foregoing discussion on these costs into account and giving effect to the learning curve we find and conclude that $90,000 for the first vessel, $15,000 for the second vessel and $5,000 for the third vessel is fair and reasonable for the production disruption and congestion Sun experienced under this Contract in the unchanged work as a result of Changes 23 and 48.

C. *"Hire-Fire" Costs*

"Hire-fire" costs refer to the inefficiency and loss of general experience and related costs arising out of the lay off by Sun for more than 30 days of 669 persons in outfitting crafts in late December 1963 through February 1964 allegedly on account of Changes 23 and 48. The Board's Representative recommended:

> "Allowances of $236,222 recommended for changes-caused layoffs of 669 workmen based upon loss of efficiency computed in accordance with the method followed by Pennsylvania State Employment Service . . . ."

The conclusion that the layoffs were tied to the changes was apparently based on the opinion that but for the changes the first vessel would have been launched on February 28, 1964, about two months after the preceding vessel in the Sun yard, the ATLANTIC HERITAGE, was delivered, which was a normal span of time in which to shift the outfitting crews from vessel to vessel.

Despite the fact that in its post hearing brief Sun claimed $435,000 for the layoff of 1,138 men from September 1963 through February 1964, Sun takes no exception to this recommendation. USL and Staff Counsel take exception to the finding of a causal relationship between the changes and the layoffs. They argue that "the layoffs occurred because of the scheduled hiatus between the delivery of the ATLANTIC HERITAGE and the first USL vessel." Sun rebuts that the first USL vessel was scheduled to be launched on February 28, 1964, and that the record is clear that Sun begins outfitting before launching and would have so commenced outfitting on the first USL vessel with the laid off men but for the changes.

We are not persuaded that there has been established a causal connection between the layoffs and the changes. The hulls in Sun's yard about the time of the layoffs and the actual or scheduled delivery dates of those hulls were as follows:

Owner	*Sun Hull No.*	*Actual or Scheduled Delivery Date*	*Delivery Sequence*
AEIL	624	6-14-63	
			42 days
AEIL	625	7-26-63	
			56 days
AEIL	626	9-20-63	
			88 days
ATLANTIC HERITAGE	627	12-17-63	
			211 days
USL	628	7-15-64 (Sun's schedule)	

The delivery sequences on Hulls 624 to 627 were consistent with Sun's testimony that it endeavored to employ a construction sequence of 60 to 90 days to permit outfitting personnel to be progressively transferred from vessel to vessel at a point in construction when the vessel was at a stage when it could most efficiently accept such personnel. The delivery sequence between the ATLANTIC HERITAGE and the first scheduled USL vessel, even utilizing Sun's early delivery schedule, which the Board's Representative did not recommend, was seven months. Sun had a choice of either changing its usual construction procedures, laying off outfitting personnel for most of the interval, or finding vessel repair or other work for the

workers affected. In the shipbuilding industry this situation, unfortunately, is not unusual because vessel construction contracts, such as for the USL vessels, are major projects requiring a relatively large labor force and such contracts simply have not been available in sufficient quantity to permit continuous employment of such labor force and thereby avoid significant layoffs.

The President of Sun testified that presented with this situation Sun's choice was to shift the outfitting crews from the ATLANTIC HERITAGE to the first vessel and proceed rapidly on the USL project. It is Sun's contention that especially the quarters changes, first authorized on October 1, 1963, and significantly modified in February 1964, frustrated this plan and that USL was advised at the time of the quarters changes to this effect. There was, also, testimony that Sun was unsuccessful in finding significant vessel repair or other work for the laid off outfitting personnel.

Even assuming that USL and MarAd can be held accountable for the consequences of the failure of Sun's special plan of shifting outfitting crews prior to launch rather than significantly after launch and even assuming the reasonableness of Sun's original launching schedule, Sun still has not established a causal connection between the layoffs and the changes because it has not established that delays in the originally scheduled launch of the first USL vessel were attributable solely or even substantially to the changes.

An essential premise of Sun's position that there is a causal connection between the changes and the layoffs is that delays in the original construction schedule, especially for the stage of construction of the first scheduled USL vessel to be launched on February 28, 1964, were solely or mostly caused by the changes. We are not persuaded

that delay in that construction schedule was caused by the changes rather than by events for which Sun was responsible.

Sun in November 1962 scheduled keel laying and launch of Hulls 628 and 629. That schedule and the actual keel laying and launch dates for those hulls are as follows:

Hull	*Scheduled and Actual Keel Lay*		*Scheduled and Actual Launch*	
628	6- 1-63	5-15-63	2-28-64	7- 7-64
629	8-30-63	6-18-63	5-31-64	5-13-64

As is evident Hulls 628 and 629 were interchanged after keel lay. This occurred in August 1963 to take advantage of the larger crane facilities at No. 8 way where Hull 629 was being constructed. Sun maintains that its decision to interchange these hulls did not result in any delay in delivery of the vessels. That position aside, it is apparent that the interchange of hulls delayed the time when the first vessel, whatever its hull designation, could receive outfitting crews including the period herein concerned, October 1963 through February 1964. From the standpoint of cumulative manhours per hull Hull 629 did not surpass Hull 628 until around January 1964. From certain other standpoints, such as percentage of erection completion, Hull 629 surpassed Hull 628 somewhat sooner in November 1963.[38] It follows that it was several months thereafter from either standpoint before Hull 629 reached the vessel percentage completion that Hull 628 would

38. The actual cumulative manhours for the USL hulls are reflected in exhibit No. 3 of Staff Counsel Exhibit L. The percentage of erection completion appears in the production analysis reports of Sun and relevant parts are contained in Staff Counsel Exhibit V.

have had but for the interchange of hulls. Consequently, it appears that the interchange of Hulls 628 and 629 was the principal cause of delay in the construction schedule plan for a February 1964 launch of the first USL vessel.

Further contributing to the delay in that construction schedule were certain other delay factors cited by the Board's Representative and by us in the finding herein that Sun would not have delivered the USL vessels on its early delivery schedule even absent the changes. These delay factors occurred before or during the time of layoffs and included work resulting from the single engine addendum signed on February 25, 1963, and the lateness in preparation of plans for an Atlantic Refining tanker delaying engineering on the USL vessels. The quarters and automation changes may have had some adverse effect on the stage of construction planned for the scheduled launch of the first USL vessel, but in view of the delay caused by the interchange of hulls and the delay caused by other factors for which Sun is responsible, we consider any delay to that schedule caused by the changes to have been insignificant.

Therefore, since Sun by its own actions would not have had the USL vessel at a stage of construction where it could have received the laid off personnel Sun has failed to establish a causal connection between the changes and the layoffs. Accordingly, Sun is not entitled to recover its claimed hire-fire costs.

V. Interest.

Aside from the basic hardware costs and the delay associated costs claimed to have been caused by the changes, Sun requests the Board to direct USL to pay interest on that portion of the award which it considers

to be liquidated or capable of computation. Sun does not "press its claim" for interest against MarAd "at this stage of the proceedings" since it is "apparently disabled by statute from recovering any interest from MarAd." [39]

Sun urges, however, that it should recover interest from USL on the amount which USL has conceded from the beginning is due from the date of contract completion, on the additional amount which the Contracting Officer awarded from the date of his award and on the amount which the Board awards in this decision until the date of payment. Sun argues that interest is payable on these amounts because they were liquidated or capable of computation.

We disagree with Sun's basic contention that any amount owing for the changes is liquidated prior to the date the determination of the Board becomes final. Article 31 of the General Provisions of the Contract provides that a contractor cannot demand payment of an amount "until after the Board's decision if the payment in question is the subject of the [disputes] appeal." [40]

Until the Board's decision is final, payment cannot be demanded and no amount can be considered to be liquidated. Accordingly, Sun's request for interest to be levied against USL is denied.

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39. Sun is correct in concluding that interest is not recoverable against the United States under 28 U. S. C. § 2516(a) (1964), unless a contract or Act of Congress specifically provides for its payment. *United States v. Thayer-West Point Hotel Co.*, 329 U. S. 585, 590 (1947); *Algonac Mfg. Co. v. United States*, 428 F. 2d 1241, 1252 (Ct. Cl. 1970).

40. This fact that a demand for payment cannot be made until after a decision of the Board distinguishes this case from *Swartzbaugh Mfg. Co. v. United States*, 289 F. 2d 81 (6th Cir. 1961), relied on by Sun. In that case the Government under the contract could, and did, demand payment after the Contracting Officer's decision.

CONCLUSION.

The Exceptions filed by Sun, USL, and Staff Counsel to the Recommended Decision and Recommended Order of the Board's Representative for this dispute are denied or sustained to the extent indicated in the foregoing discussion and for the reasons stated therein. Our findings and conclusions with respect to each controverted cost Sun claims it incurred under this Contract by reason of performance of work pursuant to Changes Nos. 23 and 48 are stated in the foregoing discussion and therefore, need not be repeated at this point. Accordingly, we find and conclude that Sun is entitled to recover the following award in this dispute. Where indicated it is based on 50,000 estimated production hours (excluding electrical labor). From the record the exact number of these hours apparently defies exact calculation. To avoid undue controversy on this matter and to permit any necessary possible mathematical correction in the award, we request that Sun on or before September 7, 1971, submit and serve on opposing parties its computation of production labor hours (excluding electrical labor) and any matter related to the award. We request that any reply thereto by USL and/or Staff Counsel be submitted within 10 days of the service date of Sun's submission. Thereafter, an order will be issued stating the exact award to which Sun is entitled.

AWARD.

HARDWARE COSTS	
Material	
Automation	$ 950,000
Quarters	2,226
Engineering Labor	287,431.71
Production Labor	
Cable Installation	334,031.46
Other	305,085 *
Sea Trial	29,952.97
Associated Costs	61,000
	$1,969,727.14*
DELAY ASSOCIATED COSTS	
Insurance	$ 15,378
Labor Escalation	38,111.86
Services	42,327.07*
Unabsorbed Overhead	236,690.78*
Overtime	80,800
Engineering Disruption	58,824
Production Disruption and Congestion	110,000
	$ 582,131.71
Sub-Total	$2,551,858.85*
10% Profit	255,185.88
Total	$2,807,044.73*

SO ORDERED BY THE MARITIME SUBSIDY BOARD
Date: August 11, 1971

JAMES S. DAWSON, JR.
James S. Dawson, Jr.,
Secretary.

* Based upon 50,000 estimated production hours (excluding electrical labor). To be adjusted when exact number of hours determined.

U. S. DEPARTMENT OF COMMERCE
MARITIME ADMINISTRATION
MARITIME SUBSIDY BOARD

DOCKET NOS. CA-62 AND CA-63

SUN SHIPBUILDING AND DRY DOCK COMPANY

v.

U. S. LINES, INC.

In the matter of cross appeals from a decision of the Contracting Officer concerning the fair and reasonable value of work performed by Sun Shipbuilding and Dry Dock Company pursuant to Changes Nos. 23 (centralized control of engine room and bridge control of main engine) and 48 (modification of crew accommodations) on five C4-S-64a design type vessels constructed for United States Lines, Inc. under Contract No. MA/MSB-11.

ORDER OF THE MARITIME SUBSIDY BOARD DETERMINING FINAL AWARD.

Served Upon:

John J. Runzer, Esq., c/o Pepper, Hamilton and Scheetz, 123 South Broad Street, Philadelphia, Pennsylvania 19101 for Sun Shipbuilding and Dry Dock Company.

Louis J. Gusmano, Esq., *William J. O'Brien, Esq.*, and *John R. Geraghty, Esq.*, c/o Kirlin, Campbell & Keating, 120 Broadway, New York, New York for United States Lines, Inc.

Robert A. Garske, Esq., *Robert J. Gomez, Esq.*, Staff Counsel, Maritime Administration, Washington, D. C.

This Order will settle the exact award Sun Shipbuilding and Dry Dock Company ("Sun") is entitled to recover under the Board's Opinion and Order served in this proceeding on August 25, 1971. It will thereby render "final" that Opinion and Order.

The decision served on August 25, 1971, found and concluded that Sun was entitled to recover $2,807,044.73 inclusive of profit for work performed in accordance with Changes Nos. 23 and 48 under Contract No. MA/MSB-11 for construction with the aid of construction-differential subsidy of five C4-S-64a vessels for United States Lines, Inc. ("USL"). This award was subject to adjustment inasmuch as it was based upon 50,000 estimated production hours (excluding electrical hours). Sun was requested to submit its computation of production labor hours (excluding electrical labor) and, "any matter related to the award." USL and Staff Counsel were given an opportunity to reply.

All parties have filed responses to this request indicating the following differences between the Board's computation of award and that of the parties:

Changes Costs	*Board*	*Sun*	*USL & Staff Counsel*
HARDWARE COSTS			
Materials-Quarters	$ 2,226	$ 6,226	$ 6,226
Other Production Labor	$305,085	$329,522.31	$297,672.14
DELAY ASSOCIATED COSTS			
Services	$ 42,327.07	$ 40,622.14	$ 42,843.59
Unabsorbed Overhead	$236,690.78	$330,804.28	$232,170.96

We accept the adjustment urged by the parties for the material costs for quarters noting it includes $4,000 indicated in the "Development" section of Sun's detailed estimate for Change 48.

The difference between the amount of other production labor urged by Sun and by USL and Staff Counsel is the inclusion of 5220 sea trial production hours in Sun's computation of production labor for Changes 23 and 48. Since these hours are reflected in the award for the sea trial, the same hours cannot be claimed again as part of other production hours. Accordingly, based upon the presentation of the parties and the determination that Sun has claimed exactly 48,784 hours in its detailed estimates for other production labor,* Sun is entitled to recover $297,665.33 for production labor under the basic changes costs (excluding clerical and sea trial hours). Also, as a result of this award for other production labor, services under delay associated costs are adjusted to $42,844.72 ($86,916.59 total additional services less $44,071.87 services allowed in the hardware award).

Sun's position on the unabsorbed overhead costs to be awarded is that the Board in directing the use of "the hull days per year utilized in USL Exhibit 33" (Decision, p. 61), directed the use of the actual hull days experienced by Sun's yard in 1963, 1964, and 1965 as shown in USL

* A check of Sun's detailed estimate for Change 48 reveals that 1044 hours were claimed in Part IV-Supplements rather than 1045 as indicated by the parties.

Exhibit 33. USL and Staff Counsel contend Sun misconstrues that direction and that it is plain the Board directed that the 6 hull yearly production rate be used "as representing 'the number of new hulls produced per year' element of the daily rate method formula." (Decision, p. 60). We found and concluded in the Opinion and Order served August 25, 1971, that the 6 hull capacity rate was the appropriate measure of "the number of new hulls produced per year" element in Sun's daily rate formula. The direction that the hull days per year utilized in USL Exhibit 33 be used in computing unabsorbed overhead was simply intended to note that that was an exhibit that contained figures utilizing the figures of 6 hull days per year. Therefore, based on the computations of the parties and adjustments for other production hours and services, Sun is entitled to recover $232,172.45 for unabsorbed overhead costs.

For the foregoing reasons, we find and conclude that under the Opinion and Order served August 25, 1971, Sun is entitled to recover the following final, adjusted award of $2,798,882.35:

FINAL AWARD

HARDWARE COSTS	
Material	
Automation	$ 950,000.00
Quarters	6,226.00
Engineering Labor	287,431.71
Production Labor	
Cable Installation	334,031.46
Other	297,665.33
Sea Trial	29,952.97
Associated Costs	61,000.00
	$1,966,307.47
DELAY ASSOCIATED COSTS	
Insurance	$ 15,378.00
Labor Escalation	38,111.86
Services	42,844.72
Unabsorbed Overhead	232,172.45
Overtime	80,800.00
Engineering Disruption	58,824.00
Production Disruption and Congestion	110,000.00
	$ 578,131.03
Sub-Total	$2,544,438.50
10% Profit	254,443.85
Total	$2,798,882.35

SO ORDERED BY THE
MARITIME SUBSIDY BOARD
Date: September 24, 1971

AARON SILVERMAN
Aaron Silverman
Assistant Secretary.

U. S. DEPARTMENT OF COMMERCE
MARITIME ADMINISTRATION
MARITIME SUBSIDY BOARD

DOCKET NOS. CA-62 AND CA-63
SUN SHIPBUILDING AND DRY DOCK COMPANY

v.

U. S. LINES
CROSS APPEALS

[Centralized Control of Engine Room—Bridge Control of Engine—Modification of Crew Accommodations]

RECOMMENDED DECISION OF PAUL N. PFEIFFER, CHIEF HEARING EXAMINER.

Served Upon:

John J. Runzer, Esq., *Stanley Wolfe, Esq.*, and *Frederick Louther, Esq.*, c/o Pepper, Hamilton and Scheetz, 123 South Broad Street, Philadelphia, Pennsylvania 19109 on behalf of Sun Shipbuilding and Dry Dock Company.

Louis J. Gusmano, Esq., and *William J. O'Brien, Esq.*, c/o Kirlin, Campbell & Keating, 120 Broadway, New York, New York, on behalf of United States Lines, Inc.

Robert J. Gomez, Esq., and *Robert A. Garske, Esq.*, Staff Counsel, Maritime Administration, Washington, D. C.

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* Exceptions to the recommended decision will be due within twenty (20) days after service of the order settling the amount of the recommended recovery to be attached hereto. Replies will be due twenty (20) days after service of exceptions.

INDEX.

– 2(i) –

FINDINGS AND CONCLUSIONS.

1. When MarAd and Owner have knowledge of the probability of major automation and crew quarters changes prior to entering into a shipbuilding contract and then order successive changes commencing 7½ months after award resulting in prolonged delay and extensive disruption, congestion, escalation, layoffs and unabsorbed overhead, such increased costs are compensable under the changes clause and Shipbuilder is entitled to recover its estimated increased costs when supported by reliable and probative evidence (pp. 70-73).

2. Where the contract calls for vessel delivery upon completion and testing after the five days notice to the Owner, Shipbuilder is entitled to recover established delay associated costs under the changes clause even though arising before scheduled contract delivery dates (pp. 74-82).

3. Where under the Disputes Clause the Maritime Administration acts, in effect, as the arbitrator of controversies among the parties to a shipbuilding contract, the primary duty of the Contracting Officer, assisted by the Staff, is to be fair to the litigants and not to place the financial interest of the Agency as contracting party above, or in derogation of their rights. The promotional aspects of the Merchant Marine Act apply equally to Shipowner and Shipbuilder (pp. 106-8).

– 2(ii) –

4. Shipbuilder's estimate of additional engineering production and disruption caused by changes found reasonable except for 10% disallowance for overstatement of plans redrafted (pp. 36-41).

5. Overhead for changed work allowed at 75% of direct labor, the rate previously established on other settled changes, rather than 72% average of entire contract including unchanged work (pp. 42-44).

6. Services rate computed at 10% of direct labor traditionally allowed by MarAd authorized rathen than 7½% Staff recommendation (p. 44).

7. Dispute over time and material for electrical cable installation resolved on median basis of multiplying 18,150 feet per vessel × .6 hour labor coefficient. Jury verdict approach sanctioned by Court of Claims and Board of Contract Appeals decisions followed (pp. 44-47).

8. Cost of second sea trial allocated two-thirds to automation change and one-third to single plane engine addendum (pp. 47-48).

9. *Rice Doctrine* held not applicable to changes clause in MarAd shipbuilding contract due to language differences, the rule of construction that ambiguities in contracts are construed against the draftsman, and the FMC policy continued by MarAd recognizing delay, disruption and rip-out as foreseeable and legitimate costs of changes under contract (pp. 49-55).

– 2(iii) –

10. Production disruption costs in the amount of $100,000 allowed for first vessel launched 75 days late due to changes. However, no such allowance authorized for succeeding vessels launched after engineering problems resolved (pp. 59-64).

11. Sun's claim of $84,677 for changes-caused congestion in unchanged work found insufficiently documented. $25,000 allowed for first vessel only (pp. 64-66).

12. Allowance of $236,222 recommended for changes-caused layoffs of 669 workmen based upon loss of efficiency computed in accordance with the method followed by Pennsylvania State Employment Service (pp. 66-69).

13. Fifteen days of pre-contract delivery dates delay plus actual post contract delivery dates delay totaling 307 days found most probable amount of changes-caused delay (pp. 83-97).

14. No allowance authorized for cost of financing due to changes-caused delay since item included in unabsorbed overhead for which recovery is allowed (p. 98).

15. Recovery of increased costs due to labor and material escalation allowed based upon 15 days plus actual delay for each vessel (pp. 98-100).

16. Sun allowed $159,210 for services to vessels during 307 day delay period caused by changes (pp. 100-103).

17. Approximately $356,000 recommended for unabsorbed overhead based upon 307 days of changes-caused delay by application of daily overhead rate formula endorsed in decisions of Court of Claims and Armed Services Board of Contract Appeals (pp. 103-108).

RECOMMENDED DECISION OF PAUL N. PFEIFFER, CHIEF HEARING EXAMINER

I

Preliminary Statement

This proceeding involves cross appeals filed by Sun Shipbuilding and Dry Dock Co. (Sun) and United States Lines, Inc. (USL) respectively, on September 9 and 24,

1969, pursuant to Article 36, the "Disputes" clause of Contract No. MA/MSB-11. The appeals are from the final decision of the Contracting Officer, issued on August 21, 1969, which fixed the sum of $2,200,000 including profit as the fair and reasonable value of the work performed by Sun pursuant to Changes Nos. 23 and 48 on five C4-S-64a cargo vessels being constructed for USL. Change No. 23 involved the centralized control of the engine room and bridge control of the main engine commonly called automation. Change No. 48 related to the modification of crew accommodations to reflect a proposed reduction of first 12 then 10 crewmen. The claim of Appellant Sun as revised stands at $6,688,893. The position of Cross-Appellant USL is that $1,614,214 is allowable. At the oral argument the Staff reduced its proposed allowance to $2,040,003.

Public hearings were held in Philadelphia, New York and Washington for the convenience of all parties, commencing December 1, 1969, and terminating January 20, 1970. An inspection of the shipyard facilities was made in Chester, Pennsylvania, to which all parties sent representatives. An opportunity was afforded for the simultaneous filing of briefs

on February 20th and oral argument was held on March 6th, 1970. After submission of additional material on April 10th and 22nd, 1970, the case was submitted for recommended decision.

II

The Background of the Dispute

A. *The Contract*

During the year 1962 there was considerable public discussion in speeches by Government as well as industry

officials concerning the feasibility of automating cargo vessel engine rooms through the installation of a bridge control console. The objective was to achieve substantial crew reductions which would cut operating costs for ship owners and substantially lessen the cost of operating differential subsidy for the Government.[1] The principal obstacle was not technology but rather union acceptance. In the absence of an expanding shipbuilding program, negotiations for crew reduction were understandably difficult.

Early in 1962 USL was contemplating the construction of five new "Racer" class cargo vessels to fulfill its ship replacement obligation under its operating differential subsidy contract with MarAd (FMB-19).

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The normal method of vessel procurement was by competitive bidding on specifications prepared by the owner's design agent and approved by MarAd which ultimately would become a partner with the owner to the extent of up to 55% of the vessel cost.

At the same time MarAd had a policy initiated by the Federal Maritime Board on November 3, 1960, by means of a guidance letter imposing an overall limitation of 2% of the single vessel contract price upon the authorization of changes under contract and approved cost settlements except in special circumstances. Under this policy subsidy participation in the cost of changes was limited to the amount such work would have cost had it been embraced in the overall bidding specifications. This was established

1. A reduction of ten crew members earning an average wage of $15,000 annually for five ships with a 25-year life was estimated to be capable of saving the Government $18,750,000 in operating differential subsidy plus reduced cost of maintenance and increase in sale or lease value of each vessel.

in recognition of "the increasing trend in requesting a considerable number of changes in design for new vessels after contract award." However, an exception to this policy was noted where a change involves "an advance in the state of the art of ship construction."[2]

On March 28, 1962, the then Chief, MarAd Office of Ship Construction, Mr. L. C. Hoffmann, forwarded a memorandum to the then Maritime Administrator Donald W. Alexander under the subject heading "U. S. Lines Cargo Ships—Third Replacement Group" concerning the prospect of automating the USL ships to be constructed after competitive bidding. A copy was sent to Code 101, the designation of Deputy Maritime Administrator James W. Gulick, who had recently come on duty.

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The memo stated that on the basis of a discussion had that day with Mr. Alexander Purdon, U. S. Lines Executive Vice President, a central (engine) control specification had been tentatively completed and was ready for issuance if and when an alternate contract price is desired; that USL did not intend to obtain an alternate price until labor agreements are reached resulting in some crew reduction which meant probably not during the bidding period; that USL did not consider it desirable to obtain alternate bids and then after the opening of these bids decide that they are not willing to go forward with the project; that USL considered labor to be the basic issue rather than to learn the increased costs through bidding procedures; and finally, in view of the need to continue their replacement ship program and the probable inability to obtain a union agreement before bid opening, USL proposed to authorize a change under the contract covering the installation of a

2. American Export Lines, Inc., Shipbuilding Contract Appeal Docket No. CA-4, 5 SRR 343, 344 (1964).

central control system after union agreements have been reached. A further general comment was interposed, namely that, in general, USL preferred to proceed on a step-by-step basis and to have other operators join them in this undertaking in order to obtain nationwide agreements with the operating unions.

Thereafter invitations to bid on the construction of five MA Design C4-S-64a cargo vessels for USL were issued by the Maritime Administration to the shipbuilding industry based on a conventional control system for the main engine.

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After bids were received but before opening, Mr. Hoffman, on July 16, 1962, dispatched another memorandum to the Secretary, Maritime Administration, under the subject heading "Estimated Reasonable Bid Price." The memorandum stated that it was the opinion of the Office of Ship Construction that a reasonable fixed price bid for each of the five ships was approximately $12,500,000 at normal rates of overhead and profit; but that in view of the competitive nature of the shipbuilding industry and past bidding experience, the low bid for each of the five ships could be expected within the range of $10,500,000 to $11,000,000. A copy of this memorandum was also routed to Code 101. Thereafter, Appellant Sun became the low bidder at a price of $52,950,000 or $10,590,000 per vessel.

On October 10, 1962, the subject contract was signed by James W. Gulick as Acting Maritime Administrator and Chairman of the Maritime Subsidy Board. Alexander Purdon, Executive Vice President, signed for USL and P. E. Atkinson, President, and Robert Galloway, Vice President, signed for Appellant Sun.

The vessel delivery dates were spaced 75 days apart and called for delivery *on or before* the following dates:

Hull 628, September 29, 1964; Hull 629, December 13, 1964; Hull 630, February 25, 1965; Hull 631, May 12, 1965; and Hull 632, July 26, 1965. Construction differential subsidy was established at a rate of 48.6% of the total cost. Under Article I(b) of the Contract Special Provisions the contractor had the right to require

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the owner to take delivery of each vessel on five days notice after completion of the contract work and passing the necessary tests.

Mr. Edward Scott Dillon, Acting Chief of the Office of Ship Construction, between November 1967 and February 1969, and therefore the Contracting Officer during that period, testified that Mr. Atkinson told him in the Fall of 1968 that "he had knowledge at the very outset of this contract that there would be a change for mechanization." Mr. Atkinson was quoted as stating on an informal basis that "he had been informed that no sooner would the ink be dry on the contract that there would be a mechanization change" and that as a result he "recognized right at the start of the contract that there would be a delay in the delivery of this ship. Consequently, he did not proceed with construction in as rapid a manner as he would have if he were not faced with mechanizations."[3] Mr. Dillon testified that he passed this information on to Mr. John McGowan, Chief of the Division of Estimates, and Mr. Hoffmann.

On rebuttal Mr. Atkinson denied knowing at the time the contract was signed that the subject changes were going to be issued; stated that he had no knowledge of having told Mr. Dillon that he knew of the changes; denied delaying the purchase of material or application of yard labor

3. Tr. A-1519-1520.

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early in the contract on the expectation that the changes would be issued;[4] and could not recall specifically when he first discussed automation with any one with regard to the USL vessels. However, it was probably in the early Spring of 1963.[5]

On November 15, 1962, Mr. Atkinson initialed a building schedule which forecast the delivery of the first of the USL ships (Hull 628) at the end of July 1964. At the time of this scheduling there were four American Export Isbrandtsen Lines C3-S-46b cargo vessels and one Atlantic Refining tanker in the yard in various stages of production—all scheduled for delivery prior to Hull 628.

On January 4, 1963, Sun's weekly production analysis reported 209 drawings for the Atlantic Refining tanker "not submitted for approval—all behind schedule." On January 11 the report stated with respect to Hull 628: "Completion of machinery arrangements in delaying structural steel orders, which are now 4 weeks behind schedule." On February 8th, Hull 628 was reported as: "Development is not progressing satisfactorily considering that four months or 1/6 of the contract have elapsed."

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B. *Chronology of Events*

On February 25, 1963, an addendum to the contract was executed increasing maximum-continuous shaft horsepower from 16,000 to 18,000. The engine configuration was changed to single plane. This was considered by Sun engineers to be an indication that automation of the

4. Tr. A-2352-3. However, on cross-examination Mr. Atkinson stated that he didn't "recall making any such statement. Would be very surprised if I did. But it could be." A-2391.

5. Tr. A-2388.

engine room was contemplated. Sun's Vice President, Engineering estimated that this addendum added 5,000-10,000 manhours of engineering time to the contract.

On March 13th Sun became the low bidder on another contract with Grace Line to build five vessels. Delivery dates were so spaced that it subsequently became necessary to reschedule delivery of the first USL vessel to July 15, 1964.

On March 15th there was a conference among Charles Zeien, Sun Vice President, Engineering and several USL officials regarding the prospect of automation at which detailed agenda items of automation engineering were considered.

On March 22, 1963, Mr. Purdon and Maritime Administrator Alexander met in Boston at the occasion of the launching of the SS AMERICAN CONTRACTOR, also a USL vessel, at the Bethlehem Steel Quincy Shipyard. Mr. Purdon testified that he told Mr. Alexander first over the telephone that:

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> "My company is willing to move forward without any guarantees from the labor unions or anything else, but we have decided that we will go for automation if the government has the funds." (Tr. A-479)

Mr. Purdon also discussed the proposal about that time with Mr. Atkinson. Automation was always considered by these officials as synonymous with and a logical parallel to reduced crew and modification of new quarters. USL would have and Sun would build the first automated cargo vessel.

There were five rounds of negotiations between Sun and USL regarding the cost of the automation change

ranging from $490,650 to $319,000 per vessel. At one point USL rejected a fixed price proposal by Sun for $350,000 per vessel to be incorporated as an addendum to the contract. Finally, on April 23, 1963, during the fifth round certain items were eliminated from the $319,000 proposal and a figure of $300,000 was agreed upon as a preliminary estimate under the standard 110% of estimated cost change order procedure.[6] On April 26, 1963, Mr. Zeien alerted his staff

6. Article 4(b), (c), (d) and (e) of the Contract General Provisions provides as follows:

"(b) The Owner, with the approval or authorization of the Board, may direct any change in the Plans and Specifications effecting a deduction from or an addition to the contract work set out therein within the general scope thereof; provided, however, if a directed change in the Plans and Specifications affects a specific guarantee set out in the Specifications or in the Special Provisions and such effect is noted by the Contractor in its estimate of the change the guarantee will be modified to the extent determined by the Board. The Contractor shall proceed promptly with all changes authorized or directed by the Owner, and approved or authorized by the Board, as provided in this Article 4; provided, however, if the Board determines that the performance of the increased work incident to a major change will subject the Contractor to damages from the consequent delay of other work of the Contractor then under contract, the Contractor shall not be required to proceed with such additional work unless the Owner agrees to pay to the Contractor such damage costs as determined and approved by the Board.

"(c) In connection with the consideration of a proposed change in the Plans and Specifications initiated by the Owner, the Owner may request (if the proposed change makes a major change in the Plans and Specifications such request shall be approved by the Board) the Contractor to submit to the Owner the Contractor's preliminary estimate of the change in cost, weight, moments and centers and delay in delivery of the Vessel which estimate shall be accompanied by a full description of the completed work which would be eliminated or would have to be modified, or acquired material which would not be used if the change is approved and of the effect, if any, of the proposed change on any guarantee of the Contractor under this contract and, if the change is a major change, the

to the fact that automation would be undertaken by owner-directed change in accordance with the items listed in the "Round Five" itemization.

6. (Cont'd.)
damage cost referred to in 4(b) above. Said preliminary estimate shall be submitted to the Owner within the time determined by the Board to be reasonably required for the preparation of such estimate. The Owner and the Board shall consider such preliminary estimate. Within a reasonable time the Contractor shall be directed to proceed by the Owner, as approved by the Board, or shall be advised by the Owner that the proposed change will not be directed. In the event the proposed change is not directed, and the Board determines that the change proposed was a major change in the contract work, the Contractor shall be reimbursed for the engineering and estimating costs involved, as determined by the Board.

"(d) Promptly and within a reasonable time, as determined by the Board, after receipt of directions from the Owner, as approved or authorized by the Board, to make a change in the Plans and Specifications, or authorization by the Owner as approved or authorized by the Board of a change in the Plans and Specifications, requested by the Contractor, the Contractor shall furnish to the Owner, in writing, a statement of its detailed estimate of the net increase or decrease in the cost of the contract work and probable delay in delivery of the Vessel to result from such change.

"(e) The Owner shall transmit such statement to the Board which shall consider the Contractor's statement and on the basis thereof and on the basis of such other evidence as the Board may deem relevant shall, as soon as practicable, approve or disapprove the Contractor's estimate. The Owner shall promptly notify the Contractor of the Board's approval or disapproval of the Contractor's estimate. Notwithstanding a dispute in connection with the Contractor's estimate of the cost of a change, the Contractor shall, nevertheless, proceed promptly with the work covered by such directed or approved change. One hundred and ten per cent (110%) of the net increase in estimated cost, if any, resulting from all change cost estimates, as approved or as finally determined, shall be added to the contract price as an adjustment thereof. In the event of a net decrease in contract cost in the total of all such cost estimates the Contract Price shall be reduced by the amount of such net decrease."

On May 13th the keel of Hull 628, the first USL vessel, was laid. On May 17th Mr. Hoffmann transmitted a memorandum to the Board summarizing the agreement between USL and Sun and noting that "The shipyard had indicated that a delay of approximately two months per ship will result from the proposed change." The change order was approved by the Board on May 31, 1963. MSB Secretary Dawson's official notification to Sun on that date referred to Sun's estimate of 60 days delay in delivery of the vessels.

Also on May 31st USL Manager of Vessel Replacement, R. B. Murphy, wrote to Sun characterizing the agreement as including "a budget ceiling of $300,000 per vessel as specified in the enclosure with Friede & Goldman's (USL design agent) letter of May 2, 1963" and "our recognition of the fact that there may be reasonable delays in the delivery of the vessels beyond the dates specified in the (contract) due to changes in engineering planning and subcontractors delivery schedules specifically involved in this charge." Also somewhat belatedly on the same date, Friede & Goldman wrote to Sun informing them that the owner proposed to order a change under contract calling for an automated engine room. The USL design agent enclosed a specification entitled "Centralized Control

for Engine Room and Bridge Control of Main Engine Dated April 30, 1963" and requested Sun to forward cost estimates and estimates of delay in delivery for each vessel "at the earliest possible date in order that an immediate decision can be reached." Copies of the letter were sent to

USL and MarAd. Mr. Galloway of Sun replied on June 11 pointing out that there was no "budget ceiling" on the estimated cost for a change under Article 4 of the contract but that every effort would be made to keep the cost to a minimum and within the "preliminary estimate"; delay was then estimated at 60 to 120 days; detailed study was being made of the Friede & Goldman April 30th specification which revealed several departures from

the specification received [7] prior to the negotiations for the automation/addendum/change order.

The Grace construction contract was signed June 14, 1963. By Sun schedule dated June 17, 1963, delivery of Hull 628 was advanced to July 15, 1964. This date was later confirmed in a September 25, 1963 schedule.

On July 7th the keel of Hull 629, the second USL vessel, was laid.

In August the keels of Hulls 628 and 629 were switched in order to take advantage of the better crane facilities at No. 8 way. USL claims this maneuver resulted in 30 days delay of the first vessel. Sun contends no delay resulted since they knew the first vessel would be late due to the automation change.

As of August 16th engineering problems connected with the single plane turbine engine (Addendum No. 1) required a complete reanalysis of

the engine foundation and the double bottom structure causing slow progress in a manner out of sequence with a normal situation.

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7. Notes of the automation conference previously held on March 15, 1963, at U. S. Lines in New York reveal that a preliminary specification (Proposed Section 102) was given to Sun at that time.

Although the change to automation set in motion a substantial potential crew reduction, Sun received no instructions to alter the crew quarters plans until September 12, 1963, when Friede and Goldman presented a sketch to Mr. Zeien entitled "Arrangement of Quarters" modifying the main and boat decks quarters as well as the galley, together with a request for a "budget price." The modification involved the proposed reduction of 12 crew members from 53 to 41 resulting in single rather than double occupancy rooms. At that time the drawings on the original arrangement were well along to completion. The proposed crew rearrangement required an almost complete change in the joiner plans. The steel plans were also affected. While the plans were being rearranged men in the piping, ventilation and electrical sections had to halt work on the old plans and mark time until the new plans were ready.

On September 23, 1963, Messrs. Atkinson and Galloway journeyed to New York to discuss the problems relating to the proposed crew quarters change with Mr. Purdon. The Sun officials requested that the change not be issued because of the probable high cost involved, plus the fact that Sun would probably never be in a position to recover all its costs and USL would in turn feel that the costs as adjudicated would be far in excess of their value. However, Mr. Purdon stated that the change was

highly necessary to fulfill the automation concept.

Mr. Atkinson made two points: (1) the cost of revising the 80-90 detailed working drawings would probably offset the decrease in work and there might, in fact, be some savings when the additional engineering was offset against the decrease in production. (2) The major cost

would be in the resulting delay in completion of the work estimated at three months with consequent delay of the Grace Line ships for the same period. Escalation on labor and interest on money to be held back for both the USL and Grace ships was estimated at over $582,000. Also, USL would be held responsible for possible liquidated damages estimated at $1 million for unexcused delay in delivery under the Grace contract.

Further discussions were held with Mr. Goldman of Friede & Goldman, and Messrs. Bachko and Murphy of USL and it was assumed that if Grace Lines were instructed by MarAd to proceed with automation then U. S. Lines responsibility for escalation, interest, and liquidated damages on the Grace Line contract would be eliminated. Also, application of overtime by Sun for the engineering revisions could probably minimize the delay in delivery time and hence the total cost to USL of the change. Such overtime and inefficiencies in engineering would necessarily be a part of the cost of the change. Mr. Bachko suggested a change order eliminating certain work in the quarters which would be left undone until the scheduled delivery of

the vessels. An unsuccessful attempt was made to contact Mr. Hoffmann so that a stop order could be issued to Sun to halt engineering work on the crew quarters that were to be revised.

On the following day (September 24th) Messrs. Murphy and Bachko accompanied by USL attorney Cunningham journeyed to Washington to confer with Mr. Hoffmann. The USL officials maintained that the crew quarters change estimate was high since considerable equipment and material were being eliminated.

That afternoon the USL officials, Mr. Dillon, then Chairman of the MarAd Crew Quarters Committee, and Mr. Donald Frye, Assistant Chief for Engineering Programs, proceeded to the Sun Shipyard at Chester and met with Messrs. Atkinson and Zeien.

On September 30th Mr. Frye dictated a memorandum for the file confirming the unnderstanding that while Maritime and USL considered the quarters modifications essential, Sun considered it undesirable from the shipyard's point of view although the yard indicated a desire to cooperate even though the modification would surely disrupt its production schedule. There was a discussion of possible liability for liquidated damages under the Grace contract. Mr. Atkinson was quoted as stating that "In the event that Sun accepted authorization of the change, it should receive a fair price for the work involved including extension of contract delivery

dates if necessary, protection against liquidated damages on the Grace Line contract, and increases in labor costs if other work in the shipyard had to be performed in a period of increased labor costs." It was noted that the Sun labor agreement expired at the end of 1963. A suggestion that Sun attempt to subcontract the engineering was said not to appear practical. Mr. Atkinson suggested that if the change were ordered, the shipyard should be authorized to utilize overtime on the engineering. The possibility of leaving some of the production work unfinished was also discussed. The conference was concluded with the understanding that Sun would review the proposed modifications and make proposals to U. S. Lines and Maritime with regard to a total price to be determined promptly for which Sun would agree to complete the entire proposed

change. This would include some amount for liquidated damages on the Grace Line contract and also a proposal whereby Sun would perform part of the proposed modifications, but to such an extent that it would not interfere with the Grace vessels construction.

On the following day (September 25th) Mr. Atkinson and Mr. Purdon met again in New York. The possibility of rescheduling the fourth and fifth USL ships after the first and second Grace vessels was discussed in an effort to avoid damages for delay in delivery of the Grace ships. A crash program was agreed upon. The Sun estimate was to be limited to Sun's costs only. Eventually, the Grace Line vessels were ordered to be automated with a 150-day authorized delay in delivery dates so that the problem

of USL responsibility for liquidated damages for delay on the Grace contract evaporated.

On the same day Mr. Galloway wrote to Friede & Goldman setting forth a preliminary estimate for modification of crew accommodations at $38,000 per vessel adding as follows:

> "As you undoubtedly appreciate, there are many factors surrounding this change order that are indeterminate at this time and our preliminary estimate is our best judgment of the situation at this time. It is, of course, subject to our final detailed estimate when all of the facts surrounding this change order are clear. We estimate that the work involved in this change will delay work in the affected area of the vessel by ninety (90) days."

An immediate decision was requested.

On September 26th Friede and Goldman sent a TWX to Sun stating that the Owner had approved the budget

estimate of $38,000 per vessel and this together with the estimate of 90 days delay was being forwarded to MarAd for formal action. The TWX added: "We feel confident MarAd will approve and participate and we request you proceed at once in order to minimize delay." Friede & Goldman then copied the Sun preliminary estimate and its answering TWX and transmitted same by TWX to MarAd without further comment.

On September 26th J. H. Lancaster, Sun's Chief Engineer, wrote a memorandum to his staff stopping all design work and ordering of material

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relating to the quarters which were to be revised. The memorandum authorized overtime where effective in reducing the delay resulting from the proposed change. According to an interoffice memo of that date 117 plans, most of which had been 90-100% completed, were set back between 75 to 0-20% of completion.

On October 1st USL's Murphy dictated a letter at his Washington office to Hoffmann indicating that USL would not accept liability for liquidated damages or other costs on Sun contracts with other parties resulting from the quarters change; would cooperate to minimize such delays; agreed to accept delivery of the fourth and fifth ships with crew quarters in uncompleted condition if necessary; approval of the change was requested as well as participation by MarAd in construction differential subsidy at the then applicable rate of 48.6%. The letter was unsigned and apparently delivered to Mr. Hoffmann by hand.

On the same day, Mr. Vito L. Russo on behalf of Mr. Hoffmann as Contracting Officer, signed a TWX addressed to USL with an information copy to Sun approving the modification of crew accommodations at the preliminary

estimate of $38,000 per vessel and possible delay of 90 days in this area of the ships. In noting the delay problem the MarAd TWX added:

> "Any delay occasioned by this change will be given full consideration at time of actual deliveries. Authorization does not include any cost or damages affecting any other contracts being processed in the shipyard consequential or otherwise."

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The MarAd staff officials only had delegated authority to approve changes involving no more than $50,000 per ship including profit. Changes involving amounts higher than $50,000 per vessel required MSB approval before authorization.

As of October 17th the parties were concerned with alarm panel lighting problems on the console to match up with the corresponding devices in the engine room.

By October 30th the new quarters general arrangement plan had been settled. In addition to the change to single occupancy rooms there were galley and pantry equipment changes and a rearrangement of the area to make them more efficient. The purpose was to convince the union that the mess could be operated with fewer men. The rearrangement of rooms and galley involved changes in ventilation, electrical lines, water piping and soil drains, etc.

On November 18th Friede & Goldman sent a TWX to Sun as follows:

> "Owner advises final union agreement requires stateroom per person. Please proceed at once to outfit present incombustible storeroom on upper deck, starboard side, aft, as a stateroom, with fittings, furnish-

ings, etc. equal to third mate's room above. Drawings will be approved locally to expedite."

Based on the single occupancy plan the parties attempted to eliminate

the hospital. However, the Coast Guard would not approve and the hospital requirement remained.

On December 11, 1963, a change order to provide for constant tension winches was authorized by MarAd at USL's request. Between August 1, 1963 and May 31, 1964, 1,240 Sun employees were laid off for more than thirty days. Of these, 245, of which 110 were skilled mechanics with more than one year's experience, never returned.

On January 2, 1964, Mr. Zeien wrote USL indicating that there were still several major unresolved areas on the automation change, namely the type of clock, ten significant U. S. Coast Guard comments, and the release which was originally scheduled for October 25, 1963, now appears delayed until January 20, 1964.

In February of 1964 it became apparent that the unions were insisting upon restoring two of the crew members formerly eliminated.

On February 14th, Mr. Watson, acting for Mr. Zeien, wrote to Friede & Goldman and referred to the proposed second change in crew quarters as estimated to involve an additional cost of approximately $5,000 per ship with a delay of 6-8 weeks in development of the area. It was noted that this situation could become a critical factor in the delivery of the first ship.

This letter was followed by another dated February 19, which advised that the figure of $5,000 additional

engineering cost per ship "was a considerable underestimate," and that a revised "preliminary estimate" would be forwarded by March 5, 1964.

In order to accomplish this change, bulkheads had to be moved unscrambling the effect on ventilation and lighting. Steel had to be penetrated. Alterations in the size of rooms required changes in the number of lights to meet the specification requirements per foot candles of lighting; changes in ceiling air outlets for air conditioning; and changes in the location of the butts in the ceiling panels resulting in engineering rework.

During April of 1964 there were 16 days of rain affecting production.

Revised galley plans were to be forwarded to Friede & Goldman for approval May 8, 1964. On May 20th conferences were being held with G. E. concerning the automation console.

As of July 17, 1964, production analyses indicated that certain drawings, information and material not associated with the changes were still needed, centrifugal pumps due in November and December 1963 had not been received until April, May and June of 1964, while engine room fans arrived in July, topping winches and anchor windlass in August and September; and electric motors were completed late. On July 31st the

exhaust inlet flanges on the main condensers were found not to be in level plane.

During June, July and August of 1964 about 200,000 manhours, equivalent to six-tenths of a month for five vessels, were diverted from the U. S. Lines contract to repair the CUYAHOGA. During this operation water damage to the engine room machinery occurred which involved sub-

stantial diversion of electricians and machinists from the USL job.

The first ship delivered (actually the second keel) had a construction time of 17 months; the second took 20 months. Deliveries occurred on November 12, 1964 (44 days late), January 15, 1965 (33 days late), April 14, 1965 (47 days late), June 29, 1965 (48 days late) and September 24, 1965 (60 days late).

Pursuant to Article 4(d) of the contract, Sun submitted its detail estimate for the basic work involved in Change No. 23 on September 3, 1965 ($2,094,116) and for Change No. 48 on October 11, 1965 ($242,518). On November 24, 1965, the detailed estimate of delay costs ($2,401,882) was submitted. Between January 1 and June 30, 1966, Mr. Dillon as Acting Chief of the Office of Ship Construction held the position of Contracting Officer.

The detailed estimates were reviewed by the Staff and on December 20, 1966, Mr. Hoffmann as Chief, Office of Ship Construction, and therefore

Contracting Officer, through Donald Frye, Division of Estimates, adjusted Sun's estimate on Change No. 23 downward to $1,242,205, and on January 13, 1967,[8] on instructions from Mr. Hoffmann, Mr. McGowan, Chief, Division of Estimates, revised Mr. Hoffmann's previous determination of allowable estimated costs as follows: Change No. 23 was increased from $1,242,205 to $1,279,550; no adjustment was made to the previous allowance for Change No. 48; an additional $315,267 of "associated costs"[9] for both changes, of which the largest items were $163,500 for "additional engineering" and $80,800 for overtime, was allowed. The adjusted total was $1,684,156.

8. Both letters were dictated by J. F. Faulstitch of the Division of Estimates, since deceased.

The text of the letter noted that "the allowance reasonably approximates the Contractor's preliminary estimate" submitted at the time authorization was being considered. However, the letter denied totally the $2,401,882 claim for disruption and delay on the principal ground that Sun's long experience as a successful designer and contractor of complex ships "clearly supports a presumption that your preliminary estimate would give full cognizance to any conditions that would affect your cost performance." The letter also noted that if the final estimate,

which represented a three-fold increase over the preliminary estimate, had been submitted as a preliminary estimate "an entirely different decision would probably have been made on the change." The letter continued:

> "Even if your final estimate could be supported . . . we contend that the Contractor in giving misleading estimates of cost which are relied upon by the Owner and the Board to justify cost commitments, waives its rights to recover costs not reasonably in consonance with the preliminary cost estimates."

During the period November 28, 1967, to February 23, 1969, Mr. Dillon served as Acting Chief, Office of Ship

9. Other "associated costs" increased were:

Escalation	$9 9,467
Financing	9,249
Services	36,873
Insurance	15,378

Construction, and as such was the Contracting Officer. On January 13, 1969, Mr. Dillon dispatched a memorandum to the General Counsel stating in part:

> "The preponderance of evidence that I have examined to date indicates that the first ship would have been delivered at least 30 days prior to the contract delivery date were it not for the changes referred to. Among other factors influencing my tentative findings to that affect are:
>
> "1. The fact that the ship was delivered only 44 days late, although the additional work and the disruptive effect of the change, when coped with in an efficient manner, should normally be expected to cause an overall delay of at least 75 days.
>
> "2. The yard has a history of delivering MarAd replacement ships ahead of schedule. In this case, the original building schedule called for such advanced delivery and the yard had sufficient motive to proceed on that basis because of follow-on work absorbing the same facilities."

On February 24, 1969, one day after receipt from the General Counsel of an answer to the above memorandum, Mr. Hoffmann became Chief of the Office of Ship Construction (the Contracting Officer) replacing Mr. Dillon, and remained as such until August 9, 1969, at which time he became Assistant Administrator for Operations as well as Acting Chief of the Office of Ship Construction. Mr. Hoffmann issued a Final Decision as Contracting Officer on August 21, 1969.

This decision affirmed the numbers in Mr. McGowan's letter of June 26, 1967. With respect to the basic change estimates the decision noted that, "Notwithstanding Owner's statement to the contrary, the plan development was of considerable consequence, both in Changes Nos. 23 and 48, and the Contractor's estimate is found to be reasonable. Total development hours allowed by the Division of Estimates when engineering allowed in the claim portion of the estimate is included are essentially the same as those of the Contractor." The decision also referred to the Contractor's material quantity estimates and labor for electrical work as overstated; reduced the claim for 10% service proration to 7½%; commented that the Contractor's estimate made no provision for improved labor efficiency on successive hulls even though such improvement did occur; and finally determined that actual overhead experience on the contract was under 72% rather than 75% as claimed.

There was considerable discussion concerning delay issues. The Contractor's estimate of 120 days delay on each vessel due to the changes, which would have involved completion of the first vessel about July 15, 1964, some 76 days in advance of the contract delivery date, was reduced to actual delay in the case of the first two ships (44 and 33 days respectively) and 44 days delay on each of the last three vessels. In support of the decision to disallow the claimed $1,400,000 for unabsorbed overhead the Contracting Officer pointed out that actual manloading in the early contract period was at a substantially lesser level than projected in the first schedule issued by the Contractor in November 1962; that although Sun had shown early completion dates on schedules for other contracts with MarAd, these were never actually achieved; that statements made

by a Sun representative in conference admitted that early completion scheduling is a regularly used morale tool to spur production; that the delivery requirements of the Grace vessels did not dictate advancement of the completion date of the first U. S. Lines vessel; that the Contractor's decision to complete Hull 629 in advance of Hull 628 necessarily retarded completion of the initial vessel since in the early stages Hull 628 was somewhat more advanced than Hull 629; that actual working plan completion and material procurement in the period prior to authorization of the mechanization change was behind the early delivery schedules; that material required for the vessels not involving the changes was delivered late so

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that first vessel completion could not have occurred prior to the proposed contract delivery date of September 29, 1964; that there is evidence of diversion of manpower to other private work of Sun which necessarily retarded completion of the USL vessels; that the additional engineering work involving the two changes does not support a conclusion that "but for" this added engineering the vessel would have been completed in advance of the contract delivery date, particularly since substantial engineering overtime was authorized; that Sun's preliminary estimates of delay in delivery of 60-120 days must actually be demonstrated, not merely anticipated.

Specifically, with respect to unabsorbed overhead, the decision pointed out that at the time the change was authorized structural hull work was in progress and since the changes reflected the engine room and quarters only, no slow down of the structural steel work was required; since the work involved in the changes was of an outfitting nature, the delay for which time is allowed occurred after

launching of the first vessel (May 1964), not during the time frame during which the Contractor claimed he experienced overhead cost (March 1964); analysis of the layoffs made during early 1964 discloses that the crafts involved were in the outfitting group and not in the structural trades then being employed on the vessels in question; the reduction in the outfitting crafts appears to have been caused by the delivery of a tanker and the last vessel being

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constructed for American Export Lines; during the period in which the delay took place (after May 1964), employment in the yard climbed steadily, leading to the conclusion that no slack in manpower utilization existed because of inability to man the U. S. Lines ships; an audit discloses that there was no evidence of any unabsorbed overhead; and the injection of additional manhours into the program by reason of the changes provides a broader base for the distribution of the overhead costs and results in the lowering of overhead rate chargeable to the non-change manhours.

With respect to disruption the decision concurred in the Contractor's engineering estimate, but denied any recovery for production disruption. With respect to congestion the decision concluded that the claimed congestion did not exist in fact based upon a tabulation of man-loading for the outfitting trades of the U. S. Lines' ships when compared to similar charts for earlier ships built by Sun disclosing equal loading density.

The decision commented on the wide disparity between the preliminary and the final estimate and concluded that "Sun misled the Owner and the Board into authorizing the change which might not have been justi-

fied as economically feasible on the basis of the higher final estimate."

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III

The Positions of the Parties on the Appeals

On appeal from the Contracting Officer's decision, Sun's claim is divided into three basic categories: so-called "hardware" [10] cost including overtime, disruption and congestion, and delay costs. The dollar amounts of Sun's claim and the positions of USL and Staff Counsel are as follows:

	Sun	*U. S. Lines*	*Staff Counsel*
"Hardware" Costs	$2,336,634	$1,312,817	$1,663,647
Overtime	80,800	80,800	80,800
Disruption			
Engineering	163,500	–	59,850
Production	601,120	–	–
Hire-Fire	435,000	–	–
Congestion	84,667	–	–
Additional Costs due to Delay [11]		[12]	[13]
Financing	51,875	9,249	–
Services	283,220	36,873	30,625
Insurance	15,378	15,378	15,378
Escalation	308,620	9,467 (labor)	9,467 (labor)
Unabsorbed Overhead	1,720,000	–	–
Total Cost	$6,080,814	$1,464,584	$1,859,767
110% of Total Cost	6,688,895	1,611,042	2,045,734
Prehearing Adjustment by Staff Counsel			$ –5,731
Revised Staff Counsel Total			$2,040,003

10. Hardware costs are defined as including engineering and production labor, material, overhead and supplemental (sea trial) expenses.

11. Based upon estimated delay of 120 days per ship or 600 days total.

12. Based upon total actual delay of 232 days.

13. Based upon total estimated delay of 209 days.

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The revised position of Staff Counsel ($2,040,003) compares with a figure of $2,200,000 contained in the Contracting Officer's decision of August 21, 1969. Sun has revised its claim upward from the level at the time of the Contracting Officer's decision through the addition of $435,000 of hire-fire costs and $320,000 of unabsorbed overhead.

It is recognized that an exhaustive discovery of documentary material involving all parties has occurred since the issuance of the Contracting Officer's decision which has had the effect of rendering that decision virtually obsolete. Although an earlier Maritime Subsidy Board had accorded presumptive validity to a Contracting Officer's decision,[14] a recent ruling of the Court of Claims in *Southwest Welding & Manufacturing v. U. S.*, 413 F. 2d 1167, 1184-5 (1969) holds that the Contracting Officer's decision "enjoys no presumptive validity whatever" . . . [Such decision] "is vacated by the appeal to . . . a Board . . . The latter then owes the Contractor a *de novo* hearing and a *de novo* decision based on the applicable law, the contract terms and a preponderance of the evidence."

Accordingly, all the evidence, including that before the Contracting Officer and that since discovered, will be considered *de novo* without any presumption whatever being attached to the Contracting Officer's findings on the file before him.

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In general Sun contends that the two changes ordered by the Owner with MarAd approval, which under the contract were required to be performed by the shipyard, re-

14. *Lykes Bros. SS Co. v. Bethlehem Steel*, Docket No. CA-3, 9 SRR 1159, 1169 (1968).

sulted in substantial benefits to the former but serious detriment to the latter in terms of substantial additional estimated "hardware," disruption, congestion, and associated delay costs for which Sun is entitled to be compensated on a cost plus (110% of cost) basis under Article 4 of the contract. On the other hand, the Owner and MarAd agree that Sun's estimated costs have been exaggerated, few records of actual costs have been submitted, the degree of delay has been amplified and is not justified since Sun could not have delivered the vessels prior to the contract delivery dates.

There are some areas of agreement. Specifically, in respect to the hardware costs, the parties are agreed on a figure of $950,000 representing the cost (without profit) of material expended in the automation change. Also agreed is the figure of $80,800 covering overtime costs and $15,378 for additional insurance.

IV

Basic Hardware Dispute

As previously indicated the parties were unable to agree upon labor and overhead costs associated with Change 23 and all basic hardware costs associated with Change 48.

The principal areas of disagreement are additional engineering hours, overhead rate, service rate, time and material for electrical cable installation and the cost of the second sea trial for the first ship.

With some exceptions, Sun's detailed estimate is carefully documented with respect to "hardware" costs. The delay estimate, considered heretofore, leaves something to be desired. Except for development plans where a total

hours figure was employed without a breakdown by individual plans, each item of work performed is identified and hours and rates of labor, the dollar value of material, and the overhead applied—the item estimated either as an increase, credit or trade-off. USL has protested that precise actual costs have not been shown—only estimates. But Article 4(d) of the contract General Provisions does not require the Contractor to furnish the Owner with a tabulation of *actual* costs—only a written "statement of its *detailed* estimate of the net increase or decrease in the cost of the contract work and probable delay in

delivery of the vessel to result from such change." (Italics supplied.)

A. *Additional Engineering Costs*

In its detailed estimate Sun has presented a tabulation of the various plans which were modified or redrawn in the development of the quarters and automation changes. In the section entitled "Central Control, Part II, Development," the tabulation is subdivided into "Mechanical Development" and "Electrical" hours totaling 14,500 hours equivalent to $96,425.[15] Other design and development cost brought the total to $118,158.

In the section entitled "Quarters, Part II, Development," only a gross total of manhours (31,500) has been presented without a breakdown into the engineering and drafting components. The total claim including material for plan reproduction is $213,475.

In its presentation at the hearing with regard to the developmental work connected with the two changes, USL mounted a serious challenge to the number of drafting

15. Computed @ $3.80 per hour plus 75% burden.

hours claimed. Two independent experts who had made a careful and detailed study of the plans involved described methods which were employed to significantly reduce the redrafting effort. Among these were such techniques as blanking out the changed portions of

plans in such a manner that the unchanged portions were retained and the changed portions redrawn to save redrafting of the unchanged portions, including the title, legend, notes and details. In addition, they challenged the claim by Sun for plans which were either superseded by the change or which were not drawn at the time the change orders were issued and, therefore, did not require redrafting. Since Sun did not provide an estimate of drafting time for each individual plan, and, in the case of the Quarters Change, did not provide a breakdown between engineering and drafting hours, these experts could not challenge the number of hours included by Sun on a plan-by-plan basis. However, they could and did prepare an estimate on a plan-by-plan basis of the number of drafting hours that Sun should have required based on their analysis.

On this basis USL would authorize 6,874 hours of additional engineering for Change 23 compared to Sun's estimate of 14,500 hours. As to Change 48 the USL experts would allow 8,284 hours as opposed to Sun's estimate of 31,500 hours. USL did, however, accept Sun's overhead rate of 75%. On cross-examination it was revealed that the witnesses were considering only drafting time—not the study, consultation, and conference time which normally precedes the actual drafting process.

In the administrative process before the Contracting Officer, Sun claimed 49,263 hours of basic change engineering. Originally the Staff

allowed a total of only 23,801 hours, 7,236 on Change 23 and 16,565 for Change 48. On reconsideration, the Chief, Division of Estimates, on instructions from the Contracting Officer, added $163,500 of "Additional Engineering" as part of a total $315,267 plus profit increase in the first allowance.

On an hourly basis [16] the additional allowance involved approximately 25,000 hours, roughly the number originally disallowed by the Staff from Sun's "hardware" engineering claim. However, Sun had also claimed an additional $59,850 for 9,224 hours of engineering disruption to unchanged work. No additional allowance for engineering disruption was contained in the Chief, Division of Estimates', decision.

The Contracting Officer's decision of August 21, 1969, included the entire $163,500 under the heading—

"3. *Added Labor Cost Due to Desruption* [sic]

	MarAd	*Sun*	*U. S. Lines*
Engineering	$163,500	$ 59,850	——"

On the 4th page of his decision the Contracting Officer stated as follows:

"BASIC CHANGE ESTIMATES Nos. 23 and 48

"Notwithstanding Owner's statement to the contrary, the plan development was of considerable consequence, both in Changes 23 and 48, and the Contractor's estimate is found to be reasonable. *Total*

16. The agreed engineering labor rate is $3.80 per hour plus 72% burden rate proposed by the Staff.

development hours allowed by the Division of Estimates when engineering allowed in the claim portion of the estimate is included are essentially the same as those of the Contractors." (Italics supplied.)

On the 8th page of his decision, the Contractin· Officer stated as follows:

"DISRUPTION

"As this factor applies to the engineering effort of the Contractor, and as discussed earlier, I concur in the Contractor's overall engineering estimate."

From the foregoing, it is clear that at the Contracting Officer's level, the Staff intended to allow Sun the full $163,500 for additional basic "hardware" engineering plus $59,850 for engineering disruption.

At the hearing Staff Counsel's presentation did not contradict the $163,500 additional dollar amount allowed, but proposed to divide it among basic hardware cost and engineering-disruption cost. Nevertheless, Sun pressed its claim for payment for its additional 9,224 hours of engineering disruption to unchanged work valued at $59,850.

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A review of the evidence convinces that Sun did in fact suffer considerable engineering disruption, not only as a result of the novel automation change which represented a substantial advance in the state of the art, but also through the successive changes in the quarters arrangement, including the unsuccessful proposed elimination of the hospital, the redesign of the galley and the re-addition of quarters for two crewmen originally thought to have been eliminated by Union agreement. The stop-

revise-go experience on these changes had a disruptive effect upon the total productive effort.

Consequently, it is evident that a mistake was made by the Contracting Officer in including the entire additional $163,500 under the heading "Added Labor Cost Due to Disruption—Engineering." The language quoted above clearly supports a conclusion that there was an intention to grant Sun the full amount of its hardware—engineering estimate. Moreover, in the final revised estimates submitted in its two post hearing briefs, Staff Counsel has given full credit for Sun's original engineering disruption claim ($59,850).

As between USL and the Staff, the latter had the benefit of a full opportunity for a careful audit of Sun's engineering hourly records while the former relies upon testimony of *ex post facto* experts, employed for purposes of this litigation, who were not participants in all the complexities associated with the then unique and novel automation

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installation nor the travail involved in the successive changes to the crew quarters arrangement. Nevertheless, the experts' analysis appears to have some merit in suggesting that Sun has overstated its basic hardware engineering claim, but it fails to present any estimate of the hours to be *deducted* from the Sun total. Admittedly, the USL estimate of hours to be *allowed* did not include Sun's consultation and conference time. Consequently, it is difficult to apply USL's approach in this decision. Moreover, USL has not seen fit to amplify the point in its two post hearing briefs.

Considering the problem as if posed to a jury [17] a fair and reasonable verdict would be to reduce Sun's hardware engineering hourly estimate (49,673) by 10% (4,967).

17. Cosmo Construction Company, 66-2 BCA par. 5736.

Applying a 75% burden rate (infra p. 44) the result is a deduction of $33,030 [18] from Sun's basic hardware engineering claim.

By reason of the foregoing it is concluded that Sun is entitled to $298,603 [19] for hardware-engineering and $59,850 for engineering-disruption.

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B. *Overhead Rate*

Sun claims an overhead rate applicable to changed work of 75%, the rate actually allowed by the Staff on other changes under this contract and said to be justified by the substantial additional supervision and high level managerial effort required by the changes herein. The Staff proposed 72% based upon the average rate actually experienced on the entire contract.

Upon consideration of the evidence it is clear that the high-level management involvement in the automation change was such as to justify the application of the higher rate for that portion of the claim. The record is replete with instances of numerous engineering conferences regarding the scope of the change, the five rounds of top level negotiation for an addendum which USL refused, the shape of the console, the problem involving matching lighting colors on the alarm panel with the corresponding engine room devices, late delivery of console by G. E., etc. The time frame extended from shortly after March 22, 1963, when Mr. Purdon first notified Maritime Administrator Alexander, and then Sun President Atkinson that USL would proceed with automation through the late Spring of 1964 when engineering problems with G. E. involving

18. $3.80 + 75% burden ($6.65) X 4,967 hours.

19. $118,158 (automation) + $213,475 (quarters) equals $331,633 minus $33,030.

the console were still unresolved. In this respect USL is more generous than the Staff and its written presentation expressed willingness to pay the 75% rate.

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With regard to the quarters change there were also many "skull" sessions concerning the several rearrangements. First, the 12 man reduction; then the Coast Guard requirement for a hospital; then the redesign and reequipment of the galley and the addition of quarters for two crewmen previously thought to have been eliminated. The time period extended from September 12, 1963 through February 14, 1964 before the rearrangement was finalized and beyond May 8, 1964, when the revised galley plans were scheduled for delivery by Sun for approval by Friede and Goldman for USL.

The time frame involved in both changes, the complexity and novelty of the automation change, as well as the extensive reworking involved in the successive crew quarters changes amply justify the 75% overhead rate readily allowed by the Staff on other changes under the contract by negotiation without formal proceedings. Government should not place a Contractor in a position of receiving a larger allowance for settling a dispute than it would receive on the same item if it litigates. Such a practice has unsavory connotations particularly where the parties have a continuing relationship involving successive shipbuilding contracts.

Moreover, the application of the average rate for an entire contract does not constitute sufficient compensation for overhead expended on changed work alone, particularly under the unique facts of this case. Under Article 4

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of the contract, the Contractor is entitled to 110% of the estimated cost on changed work clearly a cost plus agree-

ment for changes. This is separate and distinct from experienced cost under fixed price bid contract. Sun is entitled to recover its overhead cost for work performed under the changes alone. The Staff is not justified in commingling changes costs with cost for unchanged work. For the reasons indicated, the application of a 75% overhead rate to all changed work is recommended.

C. *Services Rate*

Production labor hours are normally used for calculating the cost of services, i.e., crane service, cleaning, caretaking, temporary lights, air and water services, etc. Sun alleges that MarAd has traditionally allowed a service rate of 10% but that in this case it arbitrarily reduced the rate to 7½%. Staff Counsel has not addressed himself to this matter in either of its two post hearing briefs. Nor was this issue litigated at the hearing. Accordingly, the Sun statement that the 10% rate was the traditionally accepted practice is not challenged and will be recommended for approval herein.

D. *Time and Material for Electrical Cable Installation*

Sun claims a substantial number of hours—approximately 135,000—for production labor required to accomplish changes 23 and 48. The focus of MarAd's disagreement with Sun in this area is on the production labor

required to install the electrical cable required by Change 23. MarAd and Sun agreed that the appropriate method of computing the number of labor hours required to install cable is to apply a labor coefficient (represented in hours/foot of cable) to the total cable footage. They disagreed

on the proper value of the coefficient and the appropriate cable footage against which to apply the coefficient.

The Chief of the Changes Review and Contracts Branch, Division of Estimates, Office of Ship Construction, testified that the proper labor coefficient is .39 hours/foot of cable including hookup and testing. Traditionally Sun and MarAd have used a coefficient of .5 not including hookup and testing and the Contracting Officer in his final decision actually used a coefficient of .6 including hookup and testing.

The first MarAd witness also applied the lowest labor coefficient to the labor footage actually installed on each vessel (17,000 feet—with allowance for some waste) as opposed to cable footage cut for installation on each vessel (19,300). At the oral argument Public Counsel indicated that the Contracting Officer was wrong when he accepted the .6 labor coefficient and that .5, the traditional figure, was equally wrong. Counsel argues that .4 is the proper coefficient.

At the behest of Sun an effort was made during the course of the hearing to resolve the differences between the parties on a median basis

which unfortunately failed because of the unwillingness of the Staff to compromise. Consequently, Sun in its brief is now taking the extreme position that a coefficient of .5 hours/foot should be applied to the gross cable footage of 19,300 feet per ship with an additional allowance of .3 hours/foot for hookup, calibration and testing.

The disagreement among Staff Counsel and his witnesses as well as the further disagreement between them in concert and Sun, plus the inherent nature of the dispute suggest that the subject matter is not susceptible to precise

determination after the fact and without extensive time and effort in actually measuring the cable installed which cannot now be conveniently accomplished.[20] In matters of this kind it is appropriate to make a judgmental determination based upon all the facts and circumstances which represents a reasonable compromise of the conflicting positions taken, much as would a jury in a contract damage suit. This approach has the sanction of administrative and judicial approval.

The Department of Interior Board of Contract Appeals held in *Cosmo Construction Company,* 66-2 BCA, par. 5736, as follows:

> "Because of the imponderables and unknown factors involved, it is not possible to arrive at a precise mathematical determination concerning the proper quantum of the adjustment of the contractor's claim. It is not required, however, that such a precise calculation be made in the use of the 'jury verdict approach'."

The same philosophy was adopted by the Court of Claims in *Western Contracting Corporation v. United States,* 144 Ct. Cl. 318 (1958).

The middle ground between the extreme positions taken by Sun and MarAd on total cable length and labor installation hours results in the multiplication of 18,150 feet per ship by .6 of an hour or approximately 10,890 hours, which when multiplied by the $3.30 labor rate, plus overhead at 75%, equals approximately $63,000 per ship or $315,000 for five vessels.

20. At the time of the hearing USL no longer possessed the vessels in question. Some were sold to Farrell Lines and the remainder were under charter to the Military Sea Transportation Service.

In view of the foregoing, a compromise figure of $315,000 is recommended for electrical cable installed in the five vessels under the two change orders.

E. *Second Sea Trial*

Sun claims 4,000 labor hours plus $8,000 of material for pierside testing and the second trial trip of the first vessel to be delivered. Sun's Vice President, Engineering, testified that the second sea trial was required to check on the centralized control system. USL and Counsel and one witness alleged that the trip was primarily necessitated

by the single plane engine installation (Addendum #1). Sun's witness admitted that the single plane engine was incidentally involved.

It is apparent that both elements were involved in the second trip but that automation was the predominating cause. Under the circumstances, it it concluded that two-thirds of the total cost (4,000 hours plus $8,000) should be allowed under Change 23, the balance being allocated to Addendum #1.

V.

Production Disruption, Congestion and Hire-Fire Costs.

As previously indicated the Staff has allowed and the undersigned has recommended that $59,850, the full amount of Sun's original claim for engineering disruption, be granted. Sun's claim also includes $601,120 for production disruption, $84,667 for congestion, and $435,000 for hire-fire costs for which U. S. Lines and the Staff would allow no recovery whatsoever.

U. S. Lines argues that as a matter of law the so-called *Rice* doctrine precludes recovery for delay associated damages such as disruption, congestion, hire-fire, unabsorbed overhead, etc. The Staff, while not subscribing to the application of the *Rice* doctrine to MarAd shipbuilding contract disputes, contends that no recovery for these items lies under the peculiar facts of this case. USL joins in the Staff position in the event its legal argument fails.

It is appropriate to deal with the legal contention first.

A. *The Rice Doctrine*

Delay associated costs frequently have been termed "consequential damages"; that is, damages which arise from the delay induced by the changes but which are not attributable to the increased costs of performing

the changed work itself. In 1942 the Supreme Court held in *United States v. Rice* [21] that such costs cannot be recovered under various versions of change clauses in government contracts.

In *Rice* the contract involved the installation of plumbing, heating and electrical equipment in a Veteran's Home to be constructed by another contractor. When unforeseen conditions were encountered it became necessary to stop the work of the general contractor while changes were determined and ordered. During this period of stopped work the respondent was unable to proceed with the plumbing, heating and electrical work. When work was resumed respondent had incurred additional overhead costs during the period of delay and adverse weather conditions which would not have been encountered but for the unforeseen conditions and resulting delay.

21. 316 U. S. 61.

The Court stated the issue to be whether the contractor was entitled to an equitable adjustment for damages resulting from the delay in addition to the extension of time previously granted. Deciding that respondent could not recover his delay costs, the Court recognized that recovery was dependent upon the rights of the parties as set forth in the particular contract in question. The Court said: "If there are rights

to recover damages where the Government exercises its reserved power to delay, they must be found in the particular provision fixing the rights of the parties." (p. 66).

The *Rice* change clause provided in part:

> "Article 3. Changes.—The contracting officer may at any time, by a written order, and without notice to the sureties, make changes in the drawings and (or) specifications of this contract and within the general scope thereof. If such changes cause an increase or decrease in the amount due under this contract, or in the time required for its performance, an equitable adjustment shall be made and the contract shall be modified in writing accordingly . . ." (p. 66, n. 1).

Interpreting this language in the context of the dispute before it the Court concluded:

> "It seems wholly reasonable that 'an increase or decrease in the amount due' should be met with an alteration of price, and that 'an increase or decrease . . . in the time required' should be met with alteration of the time allowed; for 'increase or decrease of cost' plainly applies to the changes in cost due to the structural changes required by the altered specifica-

tions and not to consequential damages which might flow from delay taken care of in the 'difference in time' provisions." (p. 67).

In the instant case the language of Article 4, the Changes Clause, differs somewhat from that in *Rice*. It provides first in (c) for submission to the Owner of a "preliminary estimate of the change in cost, weight, moments and centers and delay in delivery of the Vessel"

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followed "promptly and within a reasonable time" after direction from the Owner and the Board to make the change, by "a statement of its detailed estimate of the net increase or decrease in the cost of the contract work and probable delay in delivery of the Vessel to result from such change." (Article 4(d).

Thereafter Article 4(e) directs the Contractor to proceed promptly with the work notwithstanding a dispute with respect to Contractor's estimated costs of the change and further provides that:

> ". . . One Hundred and ten percent (110%) of the net increase in *estimated* cost, if any, resulting from all change cost *estimates*, as approved or as finally determined, shall be added to the contract price as an adjustment thereof." (Italics supplied).

It should be noted that this somewhat awkward language includes the use of the word "estimated" rather than "actual" cost and, therefore, appears to contemplate an approval or determination of the cost before the change work is performed. However, in actual practice, and especially where major changes are involved, cost approval or determination more frequently occurs *after* performance

of the work. This is as it should be, since the Owner, with approval of MarAd, has an absolute contractual right to order a change as long as it lies within the general scope of the contract. In such a situation, since the Contractor lacks the right to refuse to perform the work (as he could refuse to bid prior to becoming contractually obligated), it is only just and proper that

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he recover all his reasonable costs actually incurred and not be held to a sometimes hastily prepared preliminary estimate. It is principally through submission of a detailed estimate after the work has been actually performed and the costs are known, that the shipbuilder can intelligently protect his interest in recovering his costs plus ten percent profit for work performed as the result of a change order.

Thus, in actual practice the contract has been understood by the parties and interpreted as though it read: "One hundred and ten percent (110%) of the *net estimated increase in cost* of all changes as approved or as finally determined, shall be added to the contract price as an adjustment thereof." Paraphrasing the contractual language in such a manner highlights the differences between the Maritime clause (Article 4(e)) and the corresponding clause in the *Rice* contract.

In *Rice* the applicable portion of the contract reads: "If such changes cause an increase or decrease in the amount due under this contract, *or in the time required for its performance*, an equitable adjustment shall be made . . ." (italics supplied). Thus the contract provided an equitable adjustment for increases in cost *or* in the time required to perform the changed work. In the light of this language, although the result was harsh, it was entirely reasonable to conclude that consequential damages were ". . . taken care of in the 'difference in time' provision."

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In the instant case, however, the language of Article 4(e) makes no mention of an adjustment in time, but rather speaks only in terms of an addition to the contract price for estimated costs resulting from a change. In view of this important difference in language, it would be an unduly restrictive interpretation of the contract to preclude recovery for delay associated costs. To the extent that the language of Article 4(e) can be considered to be ambiguous, it has uniformly been held by the Courts, and most recently by the Court of Claims in a MarAd case, *George W. Sturm v. United States,* 421 F. 2d 723 (Ct. Cl. 1970), affirming Hearing Examiner Robert N. Hislop's interpretation of a research and development contract, that an ambiguity in contractual language is to be resolved against its drafter, which in this case is the Government. Moreover, as previously indicated, the Federal Maritime Board in 1960 established a policy implemented in administrative decisions by its successor, the Maritime Subsidy Board, through at least 1964, recognizing that "disruption, delay and rip-out costs necessarily accompany changes" under the contract.

Thus in November of 1960 the Chairman of the then Federal Maritime Board instituted a policy limiting Maritime's construction differential subsidy participation in major changes to the cost based on the change having been included in the original bid at the time of the award. As pointed out in the decision of the Maritime Subsidy Board in Docket No. CA-4, *American Export Lines, Inc., Shipbuilding Contract Appeal,* 5 SRR 343 (1964) the

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impetus for the adoption of this policy was the very type of extra costs of changes which Sun here seeks to recover. The Board said:

> "The Board considers that the Owner is under an obligation on major construction items to have its plans determined at the time of competitive bidding. *Disruption, delay and rip-out necessarily accompany changes directed in the later stages of construction and have the effect of substantially increasing the ultimate cost of the vessel."* (p. 344—emphasis added.)

Although in approving the subject changes, the Board and the Staff chose not to apply this policy to USL, its adoption together with its underlying reasoning is clear evidence that prior to entering into the instant contract the Board interpreted the changes clause in such a manner as to allow recovery for the effect of delay and disruption in increasing the ultimate cost of the vessel. Otherwise there would have been no need for establishing the subsidy policy since operation of the changes clause under a *Rice*-like interpretation would have automatically precluded recovery for delay associated costs of unchanged work. And finally, the Staff position allowing engineering disruption costs in this case is clear evidence of a current policy not to apply the strictures of the *Rice* doctrine to MarAd shipbuilding contracts.

Although pure delay costs have been denied by numerous Boards of Contract Appeals relying on the reasoning in *Rice,*[22] other Boards and

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the Court of Claims have allowed recovery of delay or standby costs under the changes clause. In *A. L. Harding,*

22. *Peter Kiewit Son's Co.,* IBCA No. 405, 65-2 BCA par. 3157; *International Builders of Florida, Inc.,* FAACP No. 67-5, 69-1 BCA par. 7706; *Jefferson Construction Co. v. United States,* 392 F. 2d 1006 (Ct. Cl. 1969), Cert. den. 393 U. S. 842 (1969); *Terminal Construction Corp.,* GSBCA No. 2693, 68-2 BCA par. 7284, aff'd. reh. 69-1 BCA par. 7428.

Inc., DCAB No. Pr-44, 66-1 BCA 5463, there was Government induced delay due to a change. The Government opposed the contractor's claim relying on *Rice*. Allowing the contractor to recover its delay and disruption costs the Board said:

> "The restaking operations formed an essential part of the changed work, and the *delay and disruption* of the Contractor's method of operation caused thereby were apparently part and parcel, so to speak, of the change itself. Where both the cause and the consequences of delay, change in performance method, or work disruption relate directly to an item of changed work, the demonstrable costs thereof would seem clearly to come within the authority provided for in the 'Changes' clause to make an equitable adjustment commensurate with the direct increased costs of the change. (p. 25,590—emphasis added.)

In *Hardeman-Monier-Hutcherson, A Joint Venture*, 67-1 BCA 6210, the ASBCA permitted recovery of overhead costs incurred during a period of delay caused by a constructive change order. The controversy involved a contract to build radio towers in a remote area in Australia. The Government representative wrongfully rejected some steel, requiring the contractor to reprocure and causing a delay in performance of the contract. Because of the remote nature of the jobsite, the contractor incurred considerable expense during the period of delay which the Board characterized as "various types of fixed and overhead costs incurred because the job required a longer period of performance by reason of rejection and replacement of the steel." (p. 28,749). The Board allowed recovery for these items on

the basis that they "were incurred as the direct result of the change . . ." (p. 28750). It should be noted that this decision is predicated on a constructive change order arising from the Contracting Officer's wrongful rejection of the steel. By way of dictum the Board indicated that its decision might have been otherwise if the change had not been a constructive one. (p. 28,748).

In *J. D. Hedin Construction Co. v. United States*, 347 F. 2d 235 (Ct. Cl. 1965) although the contractor's primary recovery was for delay costs resulting from faulty specifications held to be a breach of contract, the contractor was also allowed to recover its overhead on some changes held to be within the scope of the contract and not a breach of contract. The Court said:

> "The fact that performance was extended is immaterial, since the contractor is not precluded from recovering overhead in its costs for the added work. As a matter of fact, some overhead was allowed [by the contracting officer] with respect to some of the changes ordered." (p. 258-59). See to same effect *General Piping, Inc.*, Eng. BCA No. 2847, 69-2 BCA Par. 7894.

In *Paul Hardeman, Inc. v. United States*, 406 F. 2d 1357 (Ct. Cl. 1969), although the Court reiterated the delay aspect of the *Rice Doctrine*, it was able to avoid the problem by concluding that the costs sought by the contractor were not the result of any delay in performance (p. 1361). The Court did, however, allow plaintiff to recover his increased costs of performance of unchanged work. In his concurring opinion Judge Davis said:

> "The rule permits an equitable adjustment to cover increased costs which were the direct and necessary result of the change or changed conditions where the condition or the change directly leads to *disruption, extra work, or new procedures.* The record makes it very clear that such is the situation here and that the Engineer's Board could not properly find the plaintiff's added costs to be merely 'consequential'." (p. 1363, emphasis added).

Most recently in *Electronic and Missile Facilities, Inc. v. United States,* 416 F. 2d 1345 (Ct. Cl. 1969), the Court of Claims reversed a decision of the ASBCA which had denied the contractor's claim on the basis that it was consequential. The contract was for construction of housing for the Air Force. The Contracting Officer had ordered additional grading work which was not included in the contract. The contractor, *inter alia,* claimed an item of cost for loss of efficiency of labor due to extra work. The Court concluded that the costs were not merely consequential and that plaintiff could recover for them ". . . if and insofar as the costs claimed were a direct and necessary result of the change." (slip op. at 23).

As is readily apparent from the above discussion there has been and there continues to be much confusion as to the continued validity of the so-called *Rice Doctrine.* Although the Supreme Court has not modified the 1942 decision, the various Boards and the Court of Claims have in some instances allowed recovery of overhead and other delay associated costs while denying such recovery on other occasions. Although this confusion

persists in the decisions, one principle remains very clear and that is that these decisions do not lay down general

rules of government contract law, but rather interpret the specific contracts then before the adjudicators in the light of the particular facts of the controversy.

The instant task is the same, namely, to interpret the contract now in controversy in the light of the facts adduced at the hearing. For the reasons stated above, it is concluded that the differences in language between the *Rice* type contract and the instant contract, and the Board interpretation of the contract at the time it was entered into as evidenced by the 1960 policy letter are such that the *Rice Doctrine,* whatever the state of its validity elsewhere, is not applicable to the MarAd shipbuilding contract.

B. *The Evidence*

Sun claims $601,120 for production disruption caused by the timing of both changes which interrupted the normal sequence and orderly process of the five vessel construction project. The fact that the changes occurred and were developed concurrently with the construction of the first hull and part of the second created the disruption in production. The necessity of replanning the bridge and engine room areas affected by automation, the

crew quarters, galley, and hospital affected first by the proposed 12-man crew reduction and subsequently by the return of the two crew members, resulted in late ordering and receipt of material and consequent inactivity of construction workers. Contributing factors were said to be out-of-sequence performance and congestion in the engine room. Separate claims of $84,667 for congestion and $435,000 for layoffs are also asserted.

More specifically, Sun contends that the general unavailability of working plans prevented production

labor from proceeding in a proper and orderly sequence and left many workers literally standing around waiting for necessary instructions. In the case of automation, the new plans were very late and their novelty rendered it more difficult and time-consuming to convey proper instructions to yard supervisory personnel; material ordering and expediting functions were delayed; conventional material specifications were rendered obsolete; vendor confusion was considerable; and material procurement, storage and movement adversely affected.

Installation of the foundation for the redesigned [23] console in the first hull was difficult because its delivery, three to four months late,

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required Sun workmen to maneuver the foundation through an opening in the forward hold. Similarly, installation of steam supply lines and steam condensate returns for heating coils in the fuel and cargo tanks had to be run through the double bottoms instead of above deck. This placed additional piping in the double bottoms impeding workmen entering to perform unchanged work. Secondly, there developed a need to relocate original piping unrelated to the change in the presence, or out of the way, of the steam lines.

Sun maintains that the lay-offs required by the production disruption also had a drastic morale effect on the remaining workers reducing productivity. Sun's computation of production disruption costs is as follows:

Hull	*Total Hours*	×	*Factor*	=	*Hours*	×	*Rate*	=	*Total Costs*
629	1,035,000	×	4.0%	=	41,400	×	$5.78	=	$239,292
628	1,010,000	×	3.0%	=	30,300	×	$5.78	=	$175,134
630	940,000	×	2.0%	=	18,800	×	$5.78	=	$108,664
631	915,000	×	1.0%	=	9,150	×	$5.78	=	$ 52,887
632	870,000	×	.5%	=	4,350	×	$5.78	=	$ 25,143

23. The configuration of the console was changed from T to oblong.

The Staff takes the view that no disruption occurred in production since a plotting of Sun's manpower curve shows that manpower was applied normally until May 1964 when it was shifted for Sun's benefit to repair work. In reply Sun argues that it was necessary to procure repair work in

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order to minimize idle time and to prevent additional lay-offs.

It seems evident that some degree of production disruption occurred as a result of the changes which were major in scope and not finally settled in detail until May 1964, but Sun's method of computation appears too theoretical and too unrelated to the particular production facts to warrant acceptance.

Comparison of the vessel keel laying–launch–delivery schedules with the events as they transpired provides a clue to the extent of the disruption. The first scheduled ship (Hull 628) was approximately 4½ months late in launching (July 7, 1964, although scheduled for February 28, 1964), whereas the second scheduled ship (Hull 629) was virtually on its schedule (May 13, compared with May 31, 1964).[24]

Put another way, although Hull 628 was scheduled to be launched February 28, 1964, substituted Hull 629 was not launched until May 13th, a delay of about 75 days. Despite the application of $80,000 worth of overtime, the first ship was delivered 44 days late and the second 33 days late.

24. As previously indicated, supra p. 15, in order to utilize the superior crane facilities of Way No. 8, and with knowledge that automation would delay production, the parties had agreed to substitute Hull 629 for Hull 628 as the first ship to be delivered.

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It seems clear that considerable disruption occurred with respect to the first ship. By July 7th when the second ship was launched (37 days late), the planning problems had already been resolved (late May). Bearing in mind that the production crews were scheduled to pass from ship to ship on a 60-75 day sequence, the major impact so far as disruption, as distinguished from delay, is concerned appears to have been upon the first ship with only minimal effect upon the second ship which was launched July 7, 1964, 45-60 days after resolution of the changed development. Therefore, Sun's method of ascribing 4% of total labor hours for the first vessel to disruption, 3% for the second, 2% for the third, 1% for the fourth and .5% for the fifth remains unsupported in fact or reason.

The Staff has attempted to brush aside the disruption claim by asserting that the Government's electrical inspector considered the electrical work connected with automation as routine, that the console of the first ship arrived long before it was installed; that it was finally installed long after the major portion of the engine room work had already been completed; and that good shipbuilding practice would have called for welding the double bottom assembly and testing and cleaning the fuel tanks long before the steam supply and return lines were run through the double bottoms. This opinion testimony does not obliterate the plain fact that automation was indeed novel, that the change occurred 7½ months after

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contract signing, that the launching of the first vessel was delayed 75 days, that despite considerable overtime being applied to expedite delivery of the first two vessels, they were delivered 44 and 33 days late respectively. The evi-

dence considered clearly makes a case of disruption and delay—the only question being the dollar amount of the award.

Considering the claim as would a jury [25] it appears fair and reasonable to award $100,000 of disruption—production for the first vessel which was launched 75 days late, but to make no award for the succeeding vessels since the launching of the second vessel, although 37 days late (July 7th instead of May 31st), occurred more than a month after development problems had been resolved.

C. *Congestion*

With respect to congestion, Sun's presentation appears even more abstract. In its detailed estimate the claim is made that congestion caused an additional 20,000 hours of labor in the engine room area because of the central control system. Sun "details" the 20,000 hours as follows:

> "To estimate this factor we have used a base factor to reflect the electrical and mechanical expenditures of hours in and around the engine room as adjusted by the learning curve. The congestion

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> factors are shown below and also reflect experience gained on earlier hulls.

Hull	*Total Hours*	×	*Factor*	=	*Hours*	×	*Rate*	=	*Total*
629	220,000		3.0%		6600		$5.78		$38,148
628	210,000		2.0%		4200		$5.78		$24,276
630	200,000		1.0%		2000		$5.78		$11,560
631	190,000		.5%		950		$5.78		$ 5,491
632	180,000		.5%		900		$5.78		$ 5,202"
							TOTAL CONGESTION CLAIM		$84,677

25. See discussion of *Cosmo Construction Co.* and *Western Construction Co.*, supra pp. 46-47.

In its brief, at page 36, perhaps through a Freudian slip, Sun's claim of $601,120, previously asserted for disruption only, is consolidated with congestion without increasing the figure and no separate discussion is presented as to congestion.

In its consolidated discussion of disruption and congestion emphasis is placed upon the difficulties incurred aboard the first USL hull in maneuvering the foundation of the console through an opening in the forward hold while contract work was proceeding in the crowded engine room area and also the relocation of the steam supply and return lines in the double bottoms instead of above deck. There is no proof that these conditions persisted beyond the first vessel other than the theoretical computation quoted above.

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As previously indicated, the second vessel (Hull 628) was launched on July 7, 1964, by which time the engineering problems of the changes had been fully resolved and over a month remained for smoothing out production problems prior to launch. Under these circumstances the recovery for congestion will be limited to the first vessel. Moreover, there is no sound way of estimating whether Sun's figure of 3% of the total electrical and mechanical congestion hours in the engine room is correct. Under this method the recovery would be $38,148. Three percent would represent 1.8 minutes of each manhour. Applying the jury verdict method, it is recommended that $25,000 be allowed for congestion in unchanged work on the first vessel caused by the changes.

D. *Hire-Fire*

Sun is seeking $435,000 due to change-caused layoffs. This item was not originally contained in Sun's detailed estimate submitted to the Owner and MarAd, but was first

presented during the course of the hearing in the amount of $440,007. Moreover, the original claim extended from August 1963 to May 1964. In its brief Sun has deleted the layoff of 111 men in August 1963 and March, April and May 1964. The layoffs are tied to the changes by the assertion that the latter kept plans on the drawing boards and interrupted material procurement so that Sun was forced to lay off a major portion of its work force until the affected construction resumed

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Of the 1130 men released, 245 skilled men never returned and 53 skilled men returned more than one year after release. Sun contends that each man lost had both general experience in his craft and experience at the Sun yard—experience which bears directly on his efficiency. To the extent that men hired to replace the 298 "permanently" separated workers had less general experience and/or less Sun experience, Sun alleges a net loss of experience and in efficiency. Sun measures the value of one year of general experience at $1,000, the figure used by the Pennsylvania State Employment Service. General experience beyond four years and Sun experience beyond 18 months do not increase efficiency.

On this basis Sun suffered a loss of efficiency valued at $274,500 (47,534 hours at $3.30 per hour and 75% burden) due to net loss of Sun experience and $125,000 of efficiency due to net loss of general experience (125 years at $1,000 per year). In addition to loss of efficiency, Sun experienced a direct cost of $36,000 in layoff pay under its obligation to pay 20 hours of wages for each man laid off for more than 30 days.

Staff Counsel answers first by pointing out that the $36,000 in layoff pay has already been compensated as

part of overhead expense; second that there is no connection between the layoffs and the changes since the layoffs took place two months before the scheduled launching of the first vessel at a period of time when its construction was in the

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structural and erection stage. Thus, launching of the first vessel under this contract, the event signalling the start of outfitting, was not scheduled until the middle of February 1964. Therefore, since the layoffs were in the electrical, joiner, sheet metal and other outfitting crafts, they could not have been caused by the automation and quarters changes because the vessels were not ready to accept outfitting personnel. In reply, Sun maintains that outfitting work can and does take place before launching according to its production methods.

A review of Sun's schedule of key events reveals that on December 17, 1963, the yard was scheduled to deliver the tanker ATLANTIC HERITAGE. According to the first Sun USL building schedule dated November 15, 1962, the launch date of Hull 628 was set for February 28, 1964. In fact, the launch of Hull 629, which was substituted for 628 as the first ship, actually occurred on May 13, 1964. The second vessel (Hull 628) was launched on July 7, 1964, as compared with the originally scheduled launch date for Hull 629 of May 31, 1964.

Sun's revised presentation makes no claim for layoffs during March, April, and May 1964, presumably tying in with its argument that outfitting work can and did take place before the launch of the first vessel, (Hull 529) on May 13, 1964.

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Bearing in mind the delivery of the ATLANTIC HERITAGE on December 17, 1963, and the delay of the scheduled

launching of the first USL vessel from February 28 to May 13, it is evident that layoffs which occurred in the latter part of December, January and February were directly related to the construction delays which were in turn caused by the changes.

Review of USL Exhibit #19 which was employed on cross-examination of Sun's industrial relations witness discloses that 669 men were actually laid off during this period. Unfortunately the USL Exhibit which lists the number of workers laid off by date does not also indicate the extent of the layoff and whether the men actually returned to work. However, the Exhibit does serve to corroborate at least a portion of Sun's claim.

Employing the same method of computing loss of efficiency due to layoffs as utilized by Sun and after subtracting $36,000 severance pay already included in overhead, the proper amount of Sun's loss for the layoff of 669 men due to the subject changes is $236,222 [26] which amount is hereby recommended for inclusion in Sun's award.

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VI

DELAY ASSOCIATED COSTS

A. *The Legal Analysis*

Another question raised by this controversy is whether delay associated costs may be recovered for the period between the date Sun has shown it would have completed performance but for the change, and the originally scheduled contract completion dates. Involved are claims for financing ($51,875), services ($283,220), escalation

26. $\$435{,}000 - \$36{,}000 = \$399{,}000 \times \frac{669}{1130}$

($308,620) and unabsorbed overhead ($1,720,000). Only the insurance item is agreed. Generally, except for unabsorbed overhead, where no allowance is made, USL and the staff will allow a partial recovery for delay associated costs during the delay period after contract delivery dates.

Sun has made a persuasive argument that there is no logical reason for denial of delay associated costs merely because some of the delay occurred prior to the originally scheduled contract delivery dates. Briefly, the argument is that these costs occur because of the passage of time and are the direct consequence of the delay induced by the changes; the daily costs of delay are the same whether occurring before or after scheduled completion date; and as costs directly related to the changes they are compensable under Article 4 of the contract.

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It is well to note that the contractually scheduled delivery dates are merely the dates by which the contractor must have completed performance in order to avoid the liquidated damages imposed by the contract for late delivery. As such they provide the outside limits of the contractor's performance time but do not in any way preclude early delivery of the ships should the contractor be ready, willing and able so to demand. In fact the contract provides specifically in Article 1(b) of the Special Provisions that upon five days notice after vessel completion the owner must accept delivery. The obvious intent of this clause is to allow the contractor to deliver the ships almost immediately upon completion, whether before or after the scheduled delivery date.

Two arguments may be propounded in opposition to Sun's theory. The first of these is that by including within

the contract a projected delivery schedule and a changes clause, the Government/Owner have in effect leased the talents and facilities of the shipyard for the period set forth in the contract and where changes occur, they are responsible only for the so-called "hardware" costs of the changes during that period. In essence, the argument is that in its bid the shipyard did or should have included those costs, such as unabsorbed overhead and insurance, which are increased by delay for the entire period of the contract.

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Although there is a certain logical appeal to this argument it overlooks the fact of the contractor's right to deliver the ships as soon as performance is completed. Should the contractor desire, it could bring additional resources to bear on the shipbuilding process and thereby deliver the ships earlier than the scheduled completion date thus saving on its overhead expense or put another way—allowing its unabsorbed overhead to be allocated to the succeeding contract.

The inclusion of the clause allowing early delivery is conclusive evidence that the contract was not intended to be a lease of the shipyard for the period until scheduled rather than actual vessel delivery, but was rather a contract to build five ships in whatever time frame the contractor was able to produce but providing for liquidated damages if the contractor should exceed the delivery dates set forth in the contract.

The second equally superficial argument against allowance of estimated costs for delay occurring prior to the contract delivery dates is that to allow recovery of such costs would result in a serious dilution of the Government/Owner right to make changes.

The logical difficulty of this argument is that it misapprehends the effect of the changes clause. That clause merely gives the Government/Owner the *right* to make changes if *it* pays their cost. To say that incurring liability for pre-contract delivery date costs dilutes this right is clearly

erroneous. The right to order changes still exists, but payment of resulting costs is a part of the price for its exercise.

Another factor which both the "lease" and "dilution" arguments fail to take cognizance of is that, from the contractor's point of view, the changes clause is an onerous obligation which, when exercised, has expensive and far-reaching consequences on the conduct of the contractor's operations. This factor is especially relevant when applied to a shipyard which has a very limited number of customers for its product. If a shipyard is desirous of obtaining a reasonable share of the new commercial vessel construction business, it must bid on the invitations of the subsidized operators and accept the contract which is tendered to it. Thus the shipyard is at a disadvantageous bargaining position with the result that the changes clause is not negotiated between two equal parties, but rather is in effect, imposed upon the shipyard by the Government/Owner. Contracts of this nature have frequently been described as "contracts of adhesion." In such a situation the Courts have generally leaned toward an interpretation favoring the party which is at a bargaining disadvantage.[27]

27. *In Neal v. State Farm Insurance Companies*, 10 Cal. Rptr. 781, 784 (1961) the Court said:

"[3] As to the first, any ambiguities in the language of the contract must be interpreted against the company. Commentators have characterized the type of agreement before us as a 'contract of adhesion.' The term signifies a standardized contract, which, imposed and drafted by the party of superior bargaining strength, relegates to the subscribing party only the opportunity to adhere to the contract or reject it. Kessler, 'Contracts of Adhesion,' 43 Col. L. Rev. (1943), p. 629. The designation 'contract of adhesion' was introduced into the legal vocabulary by Patterson, 'The Delivery of a Life-Insurance Policy,' 33 Harv. L. Rev. (1919), pages 198, 222. Such an agreement does not issue from that freedom in bargaining and equality of bargaining which are the theoretical parents of the American law of contracts. Yet, today, the impact of these standardized contracts can hardly be exaggerated. 'Most contracts which govern our daily lives are of a standardized character. We travel under standard terms, by rail, ship, aeroplane, or tramway. We make contracts for life or accident assurances under standardised conditions. We rent houses or rooms under similarly controlled terms; authors or broadcasters, whether dealing with public or private institutions, sign standard agreements; government departments regulate the conditions of purchases by standard conditions.' Friedmann, Law and Social Change in Contemporary Britain, p. 45.

"[4] The rule that any ambiguities caused by the draftsman of the contract must be resolved against that party (Narver v. California State Life Ins. Co., 1930, 211 Cal. 176, 180-181, 294 P. 393, 71 A. L. R. 1374; Lagomarsino v. San Jose, etc., Title Ins. Co., 1960, 178 Cal. App. 2d 455, 464, 3 Cal. Rptr. 80), applies with peculiar force in the case of the contract of adhesion. Here the party of superior bargaining power not only prescribes the words of the instrument but the party who subscribes to it lacks the economic strength to change such language. Hence any ambiguity in the contract should be resolved against the draftsman, and questions of doubtful interpretation should be construed in favor of the subscribing party."

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Both the Staff and USL argue that delay damages which arise prior to the originally scheduled contract completion date may not be recovered absent a breach of contract. The leading case which denied such a recovery is *United States v. Blair*, 321 U. S. 730 (1944) decided only two years after *Rice*. The contract there involved was for the construction of buildings for the Veteran's Administration. The principal contractor had planned to complete the work in 314 days, although the time for performance

specified in the contract was 420 days. As a result of delay by another contractor, who was to perform the plumbing and electrical work, the principal contractor was delayed in his performance, but still managed to complete within the 420 days. The Court of Claims found that the Government had delayed arbitrarily in terminating the plumbing and heating

contract and replacing the contractor and awarded damages to respondent for that delay. However, the Supreme Court reversed on the ground that the Government was under no contractual obligation to cooperate with respondent in shortening the time for performance. The court said at p. 734 citing *Rice Doctrine* cases:

> "Respondent had the undoubted right to finish his construction work in less time than the stipulated 420 days, but he could not be forced to do so under the terms of the contract. To hold that he can exact damages from the Government for failing to cooperate fully in changing the contract by shortening the time provisions would be to imply a grossly unequal obligation. We cannot sanction such liability without more explicit language in the contract."

Although the change clause of the *Blair* contract was not quoted, the critical provisions of the contract were stated to be substantially the same as the standard form of Government construction contract then in use.[28]

Rice involved the standard form of Government Construction contract and precluded damages for delay absent a

28. Footnote No. 1, p. 731.

breach of contract. Thus the quoted language does no more than apply the reasoning of *Rice* to a substantially similar contract in order to preclude recovery of delay costs prior to the time for contract completion.

In *Laburnam Construction Company v. United States,* 325 F. 2d, 451 (Ct. Cl. 1963), the change clause in a contract to build a steamline was identical to the change clause in *Rice.* Nevertheless, plaintiff contractor was allowed to recover for delays including a period of time preceding the scheduled contract completion date which resulted from defective specifications held to be a breach of contract. In so holding the court said at p. 457:

> "We think the critical factor in this case is that all of the delay to which plaintiff was subjected came about because the specifications were deficient. *Were this not the case, defendant's contention would be correct: plaintiff would have no right to complain if the defendant's exercise of its reserved right to make changes set its work schedule awry* . . . . In this case, however, plaintiff had contracted to do the work in accordance with the specifications defendant had prepared, and defendant was, therefore, under a duty not to render the project more expensive than it would have been if the contractor could have complied with the plans." (Emphasis added).

The court took pains to distinguish this case from *Rice* on the basis that the delay was due to Government fault. The need to distinguish the case from *Rice* arose from the fact that *Rice* would preclude recovery of

any delay damages occurring either before or after contract completion date absent Government fault.

In *Gardner Displays Company v. United States,* 171 Ct. Cl. 497 (1965), although work was completed within the contract period, the contractor claimed the increased price of latex used in the production of rubber terrain maps for the Army as a proper item of delay cost. The delay had resulted from defective samples furnished to contractor by the Army. The Government claimed the increased cost of the latex was due to the Korean War and was, therefore, consequential and barred by the *Rice* doctrine. Allowing recovery the court said:

> "Time and events have somewhat eroded the much-maligned doctrine of *United States v. Rice* . . . but even granting its continued health and vitality its restriction of a contractor to a mere time extension as full contract payment for the financial consequences of reasonable delay flowing from a change order does not apply to preclude monetary damages for that part of a delay found to be unreasonable. In failing to expeditiously order the plaintiff to change the surface texture, in failing to instruct the plaintiff as to precisely what it wanted, and in its dilatory and inconclusive inspection and approval procedures as described in the findings, the Government exceeded reason and brought itself within the scope of F. H. McGraw & Co. v. United States, 131 Ct. Cl. 501, 506, 130 F. Supp. 394, 397 (1955) [holding that unreasonable delays are a breach of contract]." (p. 504).

The court concluded that the increased cost of the latex was a result of the Government's breach of contract and not merely consequential.

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In *Pan Pacific Corp.*, Eng. BCA No. 2479, 65-2 BCA Par. 4984 it was held that a contractor's completion of

performance as originally scheduled after a suspension of work does not preclude recovery of compensation for the delay, since the contractor had the right to complete performance ahead of schedule.

> "Appellant has made a prima facie showing of additional cost attributable to the suspension. It is entitled to an equitable adjustment therefor. . . . Appellant had the right to perform items of work ahead of schedule. The Government had no right to prevent such early performance by imposing and [sic] unreasonable delay as it did here." p. 23,514.

To summarize: the present state of the law (*Laburnam* et al.) is that recovery for pre-contract date increased costs is allowable where there has been a breach of contract or unreasonable delay. Not decided, however, is whether a similar recovery is allowable absent a breach of contract or unreasonable delay under a change clause to which the *Rice Doctrine* is not applicable. In other words the question to be decided is whether Sun can recover its increased costs under change orders where the delays involved were reasonably caused. The policy initiated by the FMB and continued by the MSB recognizing Government subsidy liability for delay, disruption and rip-out costs under change orders,[29] the peculiar and somewhat ambiguous language of the changes clause itself, and the particular facts of this case considered together justify recovery of the contractor's delay costs.

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In the first place the evidence shows that although the Staff estimated the reasonable bid price of the vessels in question at $12,500,000 each, because of the intense com-

29. See discussion *supra*, pp. A168-A169.

petitive situation, Sun's successful bid came in at $10,590,000 per vessel. The yard's first building schedule assumed that delivery could be made approximately 60 days earlier than contract delivery dates and its Vice President, Director of Operations testified that the purpose of the early delivery schedule was to realize overhead savings so as to make the low bid profitable.

Secondly, there is considerable undisputed evidence to the effect that both U. S. Lines and MarAd knew as early as March 28, 1962, more than six months prior to consummation, that the contract would probably be substantially varied either by an addendum or change order through a subsequent decision to change to automation. Nevertheless, USL with MarAd approval chose to invite bids on a conventional engine control system because of the unresolved labor problem.[30]

The evidence as to whether Sun was equally knowledgable on the subject is in conflict. Sun's President, Paul Atkinson, claims that the first he knew about the automation possibility was some time in March of 1963 after U. S. Lines' Executive Vice President Alex Purdon had discussed the matter

with then Maritime Administrator Donald Alexander and followed with a contract to him. On the other hand Atkinson is quoted as having subsequently told the then Contracting Officer, Scott Dillon, that "no sooner was the ink dry on the contract" then all parties were aware that they would go to automation. The record is barren of any testimony by officials of USL or MarAd to the effect that they shared their knowledge of impending automation with Sun prior to October 10, 1962, the date of contract signature.

30. See discussion pp. A127-A128, *supra.*

Under these circumstances, it is evident that Sun was invited to prepare its bid without equivalent knowledge to that of USL and MarAd that its performance was subject to delay, disruption, dispute and extended litigation—all extremely costly as events have proved.

Added to the above is the fact, heretofore discussed, that pursuant to Article 4, changes were made by direction of USL with MarAd approval and regardless of consent or objection on the part of the Contractor. In fact, the Contractor urged that the automation change be accomplished through an addendum which would have eliminated a good part of the dispute now being litigated and, as matters have turned out, might have been considerably less costly to USL and MarAd than the change procedure. In addition, Sun attempted to persuade USL not to order the quarters change until after completion of the vessels because of the high cost

involved and the relatively slight tangible benefit to be derived therefrom.[31]

Whereas the first change involved a significant advance in the state of the art which had important subsidy reduction benefits to both USL and MarAd and represented valuable experience to Sun, the second and the more disruptive change held no benefit whatsoever for Sun and was primarily of benefit to USL in its union relations.[32]

These factors considered together suggest that a major effect of the USL/MarAd change orders was to

31. This is evidence from which it can reasonably be inferred that Sun did not bid low with knowledge that losses attributable to the level of its bid would be made up through the changes.

32. MarAd benefited from the quarters change only indirectly in the sense that it was closely intertwined with the much-desired automation.

deprive the contractor of an opportunity to convert its low bid into a reasonable profit by exercising its contractual right to deliver the vessels five days after notice of completion and testing, when such delivery could have occurred before the projected contract delivery dates. The effect of such an interpretation is to consider the contract delivery dates as merely the starting point for the imposition of liquidated damages for unexcused delay rather than firm delivery dates which signalled the termination of a "lease" of the shipbuilding portion of the yard by USL/MarAd.

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Where vessels are held over in a yard by reason of additional work under owner directed change orders, there is a continued overhead expense allocable to the contract which would not have been incurred but for the incidence of the changes. This expense, which reduces the shipbuilder's opportunity for a profit, should be compensable as part of the "net increase in estimated cost, if any, resulting from all change cost estimates as approved or as finally determined. . . ." (Article 4(e)). To the extent that this clause is ambiguous, the applicable rule of construction requires it to be construed against the draftsman (MarAd) and in favor of the Contractor.[33]

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B. *The Evidence*

The next questions to be decided are whether, in fact, the vessels could have been delivered prior to the contract delivery dates, and if so, what is the proper

33. Sturm v. U. S., *supra*. See also discussion *supra* p. 73 requiring contracts of adhesion to be construed in favor of the bidder.

measure of the increased cost resulting from the pre-contract delivery date delay, if any.

The question is an exceedingly difficult one to resolve. While it is relatively simple to ascribe and measure particular incidents of delay, the ascertainment of whether such delay constitutes the proximate cause of late delivery is much more difficult.

The starting point is a comparison of the first building schedule with the projected contract delivery dates.[34] The dates of keel laying, launch and delivery, according to Sun's November 1962 building schedule, contract delivery dates, and actual performance were as follows:

	Sun's Nov. '62 Building Schedule		*Contract Delivery Date*	*Actual Performance*
1st Vessel	°Keel laying	6- 1-63		5-15-63
	Launch	2-28-64		5-13-64
	Delivery	7-29-64	9-29-64	11-12-64

° Interchanged with Hull 629 by agreement of parties 8-63

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The above table reveals that Sun was actually 16 days ahead of its own schedule for keel laying of the first vessel. Secondly, that this keel laying occurred two weeks prior to the finalization of the automation change (May 31st). Although the time from keel laying to launch was estimated at nine months in the first building schedule, actual performance was approximately 12 months. Delivery occurred 105 days late on the basis of the first schedule and 44 days beyond the contract delivery date.

Sun's opponents have challenged the proposition that its building schedule was realistic. But their contention does not take account of the disparity between the bid price and the Staff appraisal of the value of the vessels

34. The contract did not provide for keel laying and launch dates.

in question. Sun had to deliver early in order to maximize its opportunity to earn a profit on this contract. Moreover, the record shows that the preceding flight of ships Sun built for American Export had been delivered earlier than contract dates despite substantial reefer changes so that engineering development on the USL vessels could have been started early. Subsequently, the existence of the follow-on Grace construction contract using the same facilities provided an additional motive for expedition. However, Sun's revision of its building schedule to provide for delivery of the first vessel by July 15th instead of July 29th was entirely without justification except for the existence of the Grace obligation.

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There is evidence that the work under Addendum No. 1 (single plane turbine engine) consumed between 5,000-10,000 hours of engineering. However, the constant tension winches change was not considered to be a substantial delay element. One crane was inoperative in October of 1963. The substitution of Hull 629 for Hull 628 is alleged by USL to have delayed the first two vessels 30 days. The record also contains evidence of late plan and material deliveries, and unexpected additional repair on the CUYAHOGA which siphoned off workmen from the USL vessels.

None of this evidence is conclusive by itself and taken together the only sound conclusion is the probability that the early delivery dates could not have been met.[35] Equally improbable is the Staff view that as a factual matter each of the ships would have been delivered precisely

35. Testimony by Staff member Robert Lowry based upon an extensive analysis of the causes of delay affirmed the conclusion that the early delivery dates could not have been met, but provided no clue as to any degree of pre-contract delivery delay.

on its contract date absent the changes and, therefore, no pre-contract delivery date delay actually occurred.

A more productive approach would be to consider the amount of extra work the changes imposed upon the project. Here the most persuasive evidence is the testimony of Mr. Scott Dillon, Contracting Officer during

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the period November 28, 1967, through February 23, 1969, who established independent staff groups to analyze the whole picture in conducting the administrative review of the decision of the Chief, Division of Estimates, issued June 26, 1967. When Mr. Dillon prepared his memorandum of January 13, 1969, to the General Counsel, he revealed his "tentative" . . . "near certain[ty]" conclusion that the first ship could have been delivered *at least* 30 days prior to the contract delivery date absent the changes. His conclusion was based upon two factors: (1) the additional work and disruptive effect of the changes could normally be expected to cause a delay of at least 75 days; and (2) Sun's past history of early delivery.

After reviewing the discovery material and superficially studying the evidence presented at the hearing prior to January 6, 1970, Mr. Dillon modified his opinion to reflect probable delivery of the first vessel within a range of 0 to 30 days prior to the contract delivery date and if a precise date had to be selected it would have been 15 days prior to the contract delivery date.[36]

The reasons for Mr. Dillon's change of position were: (1) his review of the Sun manloading and ship repair activity during 1963 and 1964, which

36. Tr. A-1476.

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together with Mr. Galloway's testimony showed that Sun had experienced more peaks above the normal repair force of 500 men than valleys below 500 during this period causing a manpower drain away from the USL contract; (2) review of Sun's weekly progress reports which revealed that there was a backlog of some 209 working plans needed to complete work on Hull 627, the Atlantic Refining tanker, which was being delivered at the same time as the USL ships were being constructed; (3) that as late as September 20, 1963, the welding of the double bottoms in the way of the machinery space had just been completed; (4) that according to Mr. Zeien's testimony the single plane engine added 5,000 to 10,000 manhours in engineering and machinery development; (5) that as of July 17, 1964, some drawings and material foreign to the changes had not been completed nor had certain deck machinery, the anchor windlass and topping winches, etc., been delivered; and (6) that Mr. Atkinson knew shortly after the contract was signed that USL and MarAd would order a change to automation and, therefore, he did not proceed with construction as rapidly as he would have had he not been faced with automation.

Mr. Dillon considered early delivery schedules as a challenge to meet under ideal conditions without the expectation of abnormal disruptions or delays such as the single plane machinery which in his curbstone opinion added two weeks to the construction period of the first vessel. Also, any

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delay in the first vessel would "almost automatically" set back delivery of succeeding vessels because of the contractual provision for 75 days spacing between deliveries.

Mr. Dillon did not consider the delaying effect of the constant tension winches change as more than minimal, particularly since it did not apply to the first vessel.

On cross-examination counsel elicited the point that the decision to bid the CUYAHOGA repair job in July of 1964 was a Sun management decision predicated upon the expected delay to the USL vessels caused by the changes.

With respect to the assertion that a slowdown in material procurement occurred because of knowledge of impending automation, the witness conceded that this practice avoided cancellation charges which ordinarily would have been passed on to USL and MarAd and, therefore, to that extent, the latter were the "beneficiaries of that foresight." The witness also conceded that Mr. Atkinson's knowledge of impending automation also explained why Sun was behind schedule during the early stages of construction.

In addition, because of the magnitude of the changes, Mr. Dillon would have allowed the full 232 day post contract delivery date period of excusable delay rather than the 209 allowed by the Staff.

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On the question of unabsorbed overhead for which Sun claims 1,720,000 and USL and Staff will pay $57,068, Mr. Dillon testified that,[37]

> ". . . overhead was adversely affected by the requirement of the yard to continue work over a period of time which they did not anticipate and which was required because of the change, and if that period of time recognized this interval we are talking about between the theoretical early delivery date and the actual contract delivery date, I would assume that

37. Tr. A-1541-2.

whatever overhead impact that had should be properly assessed.

"I am mindful of the fact that overhead is affected by the amount of work which is in the yard in its relationship between the contract man loading and the general overhead; there is an overhead ratio which actually is changed under a different set of circumstances unless the yard can substitute or obtain work which would make the prevailing rate of overhead which existed prior to the change continue through that period.

"I do not know whether it would be affected up or down actually, but I would assume that if the change disrupted their expected workloads such that they were not able to contract for additional work so as to level out their manpower loading that there would be an adverse impact on overhead."

In considering the reliability and probity of all the witnesses who testified on the delay cost issue, the Examiner was impressed by the objectivity, resourcefulness, and breadth of knowledge and experience of this witness who served in several capacities in shipyards before coming to the Maritime Commission where he advanced to Chief, Division of Ship Design,

Chairman of the Crew Quarters Committee, Acting Chief and currently Deputy Chief of the Office of Ship Construction. In addition to degrees in civil engineering and law, Mr. Dillon has received post graduate credit in nuclear reactor engineering, authored several technical papers and was awarded the Gold Medal of the Department of Commerce on October 29, 1968, presented May 27, 1969.

Mr. Dillon appears to have made an estimable attempt to objectively study the administrative file from all angles in order to render a fair and just decision. Mr. Dillon was relieved as the Contracting Officer on February 23, 1969 after his tentative conclusions were made known in the memorandum of January 13, 1969, to the then General Counsel, Carl C. Davis, Esq., who also functioned as a member of the then Maritime Subsidy Board.

Without attempting to disparage the other witnesses who were undoubtedly sincere in their testimony, but solely to inform reviewing authorities of the reasoning for relying on Mr. Dillon rather than on the others, it is the Examiner's view that Mr. Lowry's analysis and testimony was unduly limited in scope and failed to address itself to the possibility of any pre-contract delivery date delay.

Mr. Snow, testifying for USL, stated that it would have been impossible, based upon the production reports, for Sun to have met the early delivery

date for the first vessel in July 1964. On cross-examination the witness reiterated several times that his judgment was based upon "no facts" (A-362) subsequently revised, to "the whole document" (A-363). Upon being further pressed he attributed his judgment to the late plans on Hull 627, Atlantic Refining tanker (A-364), and on the unconventional condenser arrangement (A-365) of the single plane engine. However, he was unable to state whether the tardiness in April 1963 of the 233 drawings on Hull 627 amounted to a day or more (A-376) and could not relate any of the delays to any particular Sun schedule (A-377); the witness had no personal experience with the events which preceded October 1963 and none with respect to the second quarters change (A-397, 398).

While the testimony of this witness provides corroboration of the unlikelihood that the first ship could have been delivered in July 1964, it is not sufficiently comprehensive upon which to base a conclusion as to how many days after July 29, 1964, the first ship could have been delivered.

A second USL witness, Mr. Thomas J. Young, attempted to compute the number of days of delay due to causes other than the changes, but on cross-examination he gave conflicting testimony. First, on direct examination he went through the production reports item-by-item and estimated the lost time due to the additional work separately from delay in the delivery of the

vessels. In some instances where lost time would be estimated at 10 days, delay in delivery was estimated as five days. In other instances where lost time was estimated at four days, delay in delivery was fixed at three days. However, on cross-examination, the witness' notes were examined and it was revealed that he had added together the number of days of lost time attributable to non-changed work, totaling 305 days and then arbitrarily divided this number by three and by hulls so that 31 days was attributable to Hull 629; 16 to Hull 628; 12 to Hull 630; 8 to Hull 631 and 29 to Hull 632 for a total of 96 days delay in delivery; and he had not considered the possibility that the ships could have been delivered prior to the contract delivery dates and placed the 96 days non-change delays after contract delivery dates.[38]

Mr. McGowan gave an impression of being somewhat less than objective as between shipyard and shipowner and primarily concerned with the fact that a ruling favorable

38. Tr. A-411-457.

to Sun would result in liability of the Government for additional construction differential subsidy which would be compounded if this case became a precedent for resolution of a similar and substantially larger claim asserted by Grace Line on the following contract now being

processed by the Staff.[39] Mr. Hoffmann appeared to be following Mr. McGowan's views on many aspects of the case without exercising sufficient independent analysis and judgment.[40]

Accepting Mr. Dillon's judgment that the two changes added approximately 75 days of additional work to the construction project, delivery of the first vessel could have occurred on August 29th, 31 days prior to the contract delivery date of September 29th. However, certain other events occurred, namely the addendum involving the single turbine engine which caused five to ten thousand hours of additional engineering and some production delay with respect to the unconventional condenser arrangement. Secondly, although the preceding flight of vessels being built for American Export was delivered ahead of schedule, the engineering of

39. Mr. McGowan gave instructions to the late Mr. Faulstich and the other people who worked on the Sun estimate to "Play it tough" (Tr. A-1824 et seq.).

40. Mr. McGowan was involved very closely with Mr. Hoffmann in preparing the Contracting Officer's decision (Tr. A-1828), actually preparing the backup data (Tr. A-1842). Mr. Hoffmann relied on erroneous information from Mr. McGowan with respect to the allowance for engineering-disruption (Tr. A-1990; A-2052; A-2067-8). He relied on Messrs. McGowan and Lowry on the delay issue (A-2078 et seq.). He agreed with Mr. McGowan and disagreed with Mr. Dillon on the amount of post contract delivery delay without examining the differences between their opinions (A-2096).

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the USL vessels was delayed by tardiness in the preparation of plans for Hull 627, the Atlantic Refining tanker. Thirdly, there were 16 days of rain in April 1964. Fourthly, one crane was inoperative for a short time. Fifthly, while the shipyard normally took on repair work in order to achieve full manpower utilization, there is evidence that the CUYAHOGA repair did involve more work than originally contemplated and did, in fact, cause some diversion of workers from the USL project.

On the other hand no deduction for unexcused delay relating to late ordering of materials is warranted because the preponderance of the credible evidence supports the conclusion that shortly after the contract was entered into Mr. Atkinson became aware of the probability of the change to automation and there was no need to press suppliers for delivery of material until the ships, then delayed by the changes, were ready. In addition, although the 75 days interval between deliveries set forth in the contract could have been reduced to 60 days, such reduction would probably have resulted in additional costs which would not have been compensable under the fixed price contract. Since the changes were ordered by the Owner with MarAd approval, Sun was under no duty to expend funds to minimize the delay attributable thereto unless there was an agreement for appropriate compensation such as with respect to the overtime item which accelerated the delivery of the first two ships.

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The shipyard planned to deliver the vessels 60 days in advance of the delivery dates proposed in the contract in order to render its low bid profitable. The subsequent advancement of the schedule another 16 days due to the

incidence of the Grace contract signed June 14, 1963, cannot be considered realistic in view of the fact that the automation change had already been made known and actually approved.

The incidents described above obviously substantially reduced Sun's prospect of 60 days early delivery. At the same time it is highly improbable that this reduction would have been sufficient to have caused delivery of the ships precisely on the contract delivery dates.

It is not possible, or indeed proper, to conduct an independent investigation of the facts. The question filters down to a determination as to which evidence on this subject is the most reliable and probative and, therefore, the most credible. Mr. Dillon's conclusion that but for the changes each vessel could have been delivered fifteen days prior to the contract delivery date is the most objective, carefully considered and impregnable evidence of record and, therefore, the most persuasive.

With respect to the post-contract delivery dates delay, Mr. McGowan, affirmed by Mr. Hoffmann, decided that the 44 day delay attributed to the first vessel was in fact the average excusable delay for all five

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vessels and, therefore, although Sun was eleven days ahead of the average on the second vessel, three days behind on the third, four days behind on the fourth and 16 days behind on the fifth, the shipyard was subjected to the possibility of a penalty of $2,000 a day liquidated damages for 23 days in excess of the 44 day average and was given no credit for the expeditious completion of the second vessel. Mr. Hoffmann conceded on the witness stand that it was statistically absurd to believe that each of the five ships would have been delivered exactly on its contract date,

that he did not believe it; and further that he believed in actuality that the vessels would not have been delivered exactly 75 days apart.[41] Therefore, to assume an average of 44 days delay for each vessel is unsubstantiated.

In view of the finding that the changes involved 75 days additional work (which was more than the amount of actual delay on any of the vessels) and the further fact (about which there is no dispute) that $80,800 of overtime was necessary in order to expedite the delivery of the first two vessels, it is concluded that Sun is entitled to credit for delay-associated costs purposes of every day of actual delay which occurred. As previously indicated, while the deliveries of the latter vessels might have been accelerated by incurring additional costs Sun was under no contractual

obligation to do so. Moreover, there is no substance to the implication that Sun unnecessarily or for its own purposes delayed completion of the fifth vessel which was 60 days late. Construction of this vessel [42] was in fact faster than the others.

C. *Conclusion*

In view of the foregoing, it is concluded that but for Changes 23 and 48, Sun could have delivered each of the USL vessels fifteen days prior to the proposed dates set forth in the contract. On this basis Sun is entitled to the full 232 days of actual delay plus 75 days of pre-contract delivery date delay, or a total of 307 days for purposes of computing the delay associated costs.

41. Tr. A-2097-9.

42. Construction of the first two ships entailed a total of 16¾ and 20 months from keel lay to delivery, respectively; the third ship, 21¼ months; the fourth, 17½ months; and the fifth only 15¾ months.

D. *Cost of Financing* [43]

Sun claims $10,375 per ship as its cost of financing due to the delay caused by Changes 23 and 48. This item results from the Government's delay in payment of the contractual five percent holdback until delivery.

Cost of financing is an item included in unabsorbed overhead and since some recovery is being allowed for this item—see hereinafter page 103 et seq.—it is unnecessary to consider this claim separately.[44]

E. *Escalation*

1. *Labor*

In this aspect of the claim there is a dispute between MarAd and Sun as to the extent to which the cost of labor increased during the period of the contract and to the number of labor hours expended in higher wage periods as the result of the changed-caused delay.

Sun based its computation upon 120 days delay of engineering labor and 90 days delay of production labor. The Staff took the view that only outfitting labor was delayed and in line with its position allowed only the

actual delay on the first two ships and 44 of the 47 days delay on the third ship. No allowance was awarded for any labor escalation on the last two ships.

In answer to the Staff's position, Sun argues that the lowered manloading of the ships after the delay became

43. Increased insurance costs were stipulated at $15,378. (Tr. 589).

44. In Exhibit SS-73 Sun appears to be claiming $1,515,000 for delay in payment. No interest is allowable under the contract for delays in payment while items are in dispute.

known and the shift of non-outfitting hours into a later time period was necessary in order to maintain construction sequence and reduce the overall cost of both the changed work and the basic contract work. Appellant admits that it deliberately retarded the pace of construction set by the first three vessels in order to keep costs of the changes to a minimum.

Since the escalation resulted from the delay in construction of all five vessels, caused by the two changes, there is no legal justification for eliminating the increased cost attributable to the last two ships. The major issue has already been decided, namely the extent of the excusable period of delay. Rather than 120 days a ship, as claimed by Sun, it is, as previously stated, 15 days plus actual delay of each vessel, which in the case of the last two vessels amounted to 63 and 75 days, respectively. Escalation affected non-outfitting as well as outfitting labor hours and Sun's decision to maintain construction sequence so as to reduce the overall cost of the contract was reasonable and consistent with its obligations under the fixed price character of the non-changed construction.

It follows that Sun is entitled to recovery of labor escalation for both non-outfitting and outfitting hours computed on the basis of 15 days plus actual delay for each vessel.

2. *Material*

In its material escalation claim Sun estimated the dollar value of material which was purchased late due to the changes and applied the wholesale price of metals and products index used by MarAd in fixed price plus escalation contracts, after specifically excluding materials ordered prior to the changes.

There is no substantial dispute regarding the method used. Here, as in the other delay associated costs, the extent of excusable delay to be used as a coefficient is, as previously determined, namely 15 days plus the period of actual delay per vessel and, accordingly, Sun is entitled to material escalation computed on that basis.

F. *Services*

Sun claims $283,220 for services encompassing support activities incurred on a daily service during the delay period and including items such as crane service, cleaning and caretaking, temporary lights, air and water services, etc. The claim is calculated on the number of days added to the construction time computed at 120 days for the first three vessels and 30 days each for the fourth and fifth vessels where, as a result of management decision, construction was only extended one month. The Staff estimates the actual lengthened construction periods as follows: Hull 629, 1½ months; Hull 628, 1 month; Hull 630, 1½ months; Hull 631, 1 month; and Hull 632, 1 month, totaling six months.

There was also a disagreement as to the number of hours per month applicable to the services. Sun estimates 3,500 hours of services per month based on the following statement by Mr. Maling: ". . . review of the services with Mr. Galloway, and it was his opinion that his service people required that many hours. This was the combination of accounting records and other information supplied by him to come to those hours." The 3,500 hours figure reflects a deduction for the services increment of the basic hardware claim.

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On the other hand, the Staff allowed only 1,870 hours per month based upon the lowest number of hours per month actually experienced in three structure code areas (crane service, cleaning and caretaking, and temporary lights, air and water services). It is the Staff's view that the additional service cost should be based upon the minimum service which could be applied to a vessel during its outfitting period. The resulting computation at 72% overhead is $63,729.60 from which the services allowance included in the basic hardware cost, computed at 7½% of direct labor hours and 5% of subcontractor costs, was deducted giving a net figure of $33,104.60 compared with Sun's claim of $283,220.

The first issue, namely the number of days of delay, is relatively simple. As the result of the previous recommendation herein, the first three ships were found to be delayed by 59 (44 + 15); 48 (33 + 15); and 62 (47 + 15) respectively. The agreement of the parties as to the 30 days delay for each of the last two vessels is accepted. Thus the total delay to be used as a coefficient in the computation is 229 days.

As to the labor hours per month, the Staff's reliance upon the *minimum* rather than the *average* number of hours does not seem to be fair and reasonable. Granted that there are higher than average costs for cleaning services incurred during the last two months before delivery,

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the proper method of estimating the services cost would be to take the average of the three structure accounts for the construction period, less the last two months of cleaning service. Sun has computed this figure which rounded

down equals 5,000 hours per month. Sun then subtracted 1,500 hours per month to account for the services allowance already included in the basic hardware determinations. The Staff has not objected to the calculation–only to the fact that Sun employed average rather than minimum monthly hours–a position which has been rejected hereinabove.

In view of the foregoing, the delay-services allowance should be computed as follows: the number of days delay (7⅔ months) × 3,500 hours per month = 27,545 hours × $5.78 [45] per hour labor = $159,210.

G. *Continuing Overhead During a Period of Changes Caused Delay*

Sun has characterized as "unabsorbed overhead" those fixed costs which exceed the fixed portion of the overhead awarded under the hardware part of the claim and which continued during the period of delay caused by the changes. The accountants presented by USL and Sun are in basic agreement that continuing overhead is defined as those costs of maintaining

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a facility which depend not on the level of the utilization of the facility, but strictly on the passage of time, such as rent, property taxes and depreciation. Such costs are properly allocated among the various items of work for which the facility is being utilized, i.e., ship repair, conversion and construction. Sun's claim assumes that the more time it takes to complete an item of work in the same facility, the greater the continuing overhead allocable to that item and, therefore, any extension of time needed to perform a given contract necessarily carries with it an in-

45. Based upon overhead at 75%. See discussion pp. A158-A159 *supra*.

crease in the continuing overhead costs allocable to that contract.

The theory of unabsorbed overhead computed on a daily rate basis is not substantially in dispute, but its application to the facts of the case and the amount of recovery is. Thus Sun claims $1,720,000 for 608 days of changes-caused delay. USL claims no recovery for 209 days of delay allowed by the Staff and the Staff would allow $57,068 [46] based upon a restricted view of the facilities exclusively reserved to the USL contract during the delay period, namely, wet basin, gantry cranes, jib crane and hoists, temporary lighting, trash removal, telephone service, water and miscellaneous, including ventilation fire lines, hose hookup and other nominal cost items.

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As previously determined hereinabove the changes-caused delay amounts to 307 days or 75 days plus the actual period of delayed delivery of each vessel. See pages 83-97 *supra*. In addition, the legal authority for payment of unabsorbed overhead *inter alia* has been discussed at pages 70-82 and it has been concluded that while there is no direct authority for such payment where the delay has been caused by changes under the contract rather than a breach of contract or unreasonable delay, nevertheless the language of Article 4 is such that the *Rice Doctrine* does not apply and unabsorbed overhead *inter alia* is an increased cost caused by changes which would be compensable as part of the 110% of cost recovery under the changes clause.

USL and Sun are in agreement that the "daily rate" method of overhead computation as embodied in a standard daily rate formula is a proper means of arriving

46. From this figure the Staff would deduct $329 based upon a post-hearing recalculation of overhead.

at overhead incurred. This method also has the endorsement of the Court of Claims and the Armed Services Board of Contract Appeals.[47]

There are four basic elements to the formula as applied to this case:

1. Continuing overhead attributable to non-hull production is subtracted from the total continuing overhead for the entire yard producing continuing overhead attributable to new hull production.

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2. The latter is divided by the number of new hulls normally produced per year × 365 days producing continuing overhead (new hull)/vessel days.

3. This figure is multiplied by the vessel days delay due to changes to produce the continuing overhead due to change caused delay.

4. The continuing overhead absorbed by Sun's hardware claim is subtracted from this result to produce the continuing overhead recoverable as a cost under the contract changes clause.

While the Staff does not disagree with the daily rate method, its restriction of the allocable overhead items to the wet basin, etc., is unrealistic. When changes-caused delay occurs in the early part of a five vessel construction program so as to have a delaying effect upon the production of each vessel, the result is that a large part of the work force and all of the facilities of the shipyard which are devoted to new construction, not simply the wet basin, become affected. Thus, the overhead items applicable to the total new construction facility must be taken into account in computing unabsorbed overhead.

47. *J. D. Hedin Construction Co.*, supra and *Eichleay Corp.*, ASBCA No. 5183, 60-2 BCA, Par. 2688 (1960).

The Staff's zeal in attempting to minimize the recovery is commendable from a taxpayer's standpoint, but under the Disputes Clause the Maritime Administration is more than a party to the contract; it is the

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arbitrator [48] of differences among the parties. The first duty of the

48. Article 36 provides as follows:

"DISPUTES.—Any action, omission, direction, decision or determination of the Board, the Owner or the Contractor under this contract may be the subject of a dispute. Any dispute arising under this contract which is not disposed of by agreement of the parties to this contract, shall be decided by the Chief, Office of Ship Construction, of the Maritime Administration, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor and to the Owner, which decision shall be final and conclusive and shall bind all parties to this contract unless within thirty (30) days from the date of receipt of such copy the Contractor or the Owner appeals from said decision by mailing or otherwise furnishing said Chief, Office of Ship Construction, a written appeal addressed to the Board. The decision of the Board on any question of fact, unless determined by a court of competent jurisdiction to have been fraudulent, capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith or is not supported by substantial evidence, shall be final and conclusive and shall bind all the parties to this contract. In connection with any appeal proceeding under this Article 36, the Contractor and the Owner shall be afforded an opportunity to be heard before the Board or before the duly authorized representative or representatives of the Board appointed for the hearing of said appeal and an opportunity to offer evidence in support of or in opposition to the appeal. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the contract work and in accordance with the decision of said Chief, Office of Ship Construction. The fact that the Owner, with or without comment, refers to the Board as hereinbefore provided, the Contractor's estimates as to the cost and time of making changes, shall not prejudice the rights of any party to have any dispute relating thereto decided under this Article 36."

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Contracting Officer, assisted by the Staff, is to be fair to the litigants and not to place the financial interest of the agency as a contracting party above, or in derogation of, their rights. Moreover, the promotional aspects of the Merchant Marine Act apply equally to shipyard and shipowner and there is no justification for preference to one or prejudice to another in adjudicating disputes such as the instant case.

In computing the amount of unabsorbed overhead, it is necessary to determine how many new hulls were normally produced by Sun within a period of a year. A dispute arose between Sun and USL, the former taking the position that the proper number was 4 to 4.5 a year and USL taking the higher figure of 5 to 6 hulls per year. Over the three year period 1963-1965 Sun actually experienced 5,609 hull days, of which 347 involved four vessels, a C1, C2, Hull 639 and Hull 645 which Sun did not consider as new hulls since the first two were American Export conversions of ore carriers to containerships and the latter were two very small barge-type vessels whose construction was essentially an incidental effort for Sun. Sun allocates these vessels to the repair category and subtracts the 347 hull days from the total, giving a figure of 5,262 which divided by 365 days each for three years produces a normal hull production of 4.8 vessels per year.

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The conversion of the American Export ore carriers to containerships is more properly described as construction rather than repair. The total conversion cost was $7 million [49] indicating the substantial nature of the project.

49. *Sun Shipbuilding and Dry Dock Co., Inc.—American Export Isbrandtsen Lines, Inc.*, Docket No. CA-37, 7 SRR 1102, 1105 (1967).

The construction of the two barge-type vessels is still new construction even though incidental to Sun's total operation. Including the 347 days in Sun's total results in a rounded off five hulls per year normal new construction experience.

On this basis, under the formula contained in Sun Exhibit SS-74, p. 5, entitled "Computation for Five Hull Normal Production" and substituting 107 vessel days delay in 1964 and 200 vessel days delay in 1965, the result is a recovery of approximately $356,000 for unabsorbed overhead.

Subject to recomputation in the order settling the total amount of Sun's recommended recovery, this method is hereby recommended for adoption by the Board.

VII

Recommended Order

In order to avoid unnecessary controversy over the computation of the recovery recommended hereinabove, Appellant is requested to submit and serve upon the opposing parties its computation in accordance with the recommended decision within ten (10) days of the service date. Appellant-Respondent, U. S. Lines, and Respondent Staff may submit a counter computation within ten (10) days thereafter. The time for exceptions and replies thereto will run from the date of the issuance of the order settling the computation which will be attached to the recommended decision.

Paul N. Pfeiffer

Paul N. Pfeiffer

Chief Hearing Examiner

June 1, 1970

EXCERPTS FROM TESTIMONY.*

MR. ATKINSON.

Q. Mr. Atkinson, we have previously introduced into evidence several shipbuilding schedules of Sun Ship. In particular I refer to what has been marked SS-20, schedule dated November 15, 1962; and SS-23, a schedule dated 6/17/63. Both of these are signed P. E. Atkinson.

Is that your signature?

A. Yes.

Q. Did you in fact issue those schedules?

A. Yes.

Q. Now, turning our attention to SS-20, which is the schedule dated November 15, 1962, with specific reference to [Hull] 628, the schedule shows a delivery date in July of 1964; is that correct?

A. Correct.

Q. Did you set that delivery date?

A. Yes.

Q. What factors went into the setting of that date?

A. Well, John, the establishment of this schedule—this is the basic schedule from which all other things in our plant flow. There are a multitude of things that go into the decision-making that decides this is what we should schedule our work, this is how we should schedule our work.

The contract that we had signed, of course, is a factor; the ability of our plant to produce is a factor; the number of people that we think we can hire to do this work is a factor; the engineering tasks that must be performed are a factor; the other work that precedes this and the phasing in of this work into the other work is a factor; the delivery of components, machinery and many, many other things.

Q. Is cost a factor that goes into that setting?

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* Citations are to the official transcript.

A. Yes. We attempt to establish the schedule that in our judgment will result in the least cost schedule, balancing out all of these various factors that are involved.

[1010-11]

Q. Now, picking up on Mr. Pfeiffer's question, Mr. Atkinson, do you believe, based on your experience in the business, that the scheduling of delivery of the first U. S. Lines ship for July 1964 was a reasonable schedule?

A. Of course. I wouldn't have scheduled it otherwise.

Q. In your opinion, was it within the capability of the Yard to do so?

A. Without a doubt.

Q. Did the Yard have the physical manpower to perform that schedule?

A. We either had it or had it available or could have obtained it. Actually it depends on the point in time that you are talking about, John. If you go back to a level of where we had 2,000 people three years ago—this whole period was a buildup of people.

Q. You are referring to the period of '63 through '65?

A. Yes. This period '64—right; '64 and '65. If you look at our equipment you will find that this program contemplated a reasonable buildup of people. So that when you say did we have the people, I don't know as of the particular date; we are talking about whether we had the people or not.

But the numbers of people involved were certainly not beyond the situation that we had gone through many times in the past.

Q. Did the Yard have the physical facilities to meet the July delivery date?

A. Yes.

Q. Mr. Atkinson, if changes 23 and 48 had not been issued, in your opinion, would Sun have been able to deliver the vessel, that is 628, let us say more accurately the first U. S. Lines vessel, would Sun have been able to deliver the first U. S. Lines vessel in July of 1964?

A. Yes.

Q. Do you have an opinion as to the reason why Sun was not able to deliver the first U. S. Lines vessel until November 1964?

A. It was delayed by those two changes, John.

Q. You mean 23 and 48?

A. The quarters and the automation.

[1015-17]

A. '63 I'm talking about. October, November, December and January of '64.

Q. What was the reason for your layoff problems during that time period? Why did you have to lay those men off?

A. Well, the engineering work and the material and equipment, and the whole program that we had laid out, was interrupted and changed.

Q. By what?

A. Essentially by the quarters change; also by the automation change. It may be hard for people to understand how they get together. The major influence of the one on the other, there is a certain ability of our engineering department to cope with either change, and when we throw an awful lot of electrical work in, which both of these jobs are, they necessarily intertwine, they run up against a problem in engineering design manpower.

And it's hard to talk about one without the other and it's hard to identify which one caused the delay in the ship. I think one must acknowledge that almost all ships that I know of are completed, or are delayed in completion, by

major electrical testing, mechanical testing, and trials and so forth, which in turn is sequenced by the electrical installation work which in turn is geared to the electrical design work and the availability of electrical material.

So that simplifying—and probably over-simplifying—I would say that the change in electrical design work and the lack of work assignments, particularly in the electrical trades, were the major reasons for the layoffs.

Now the same thing applies to the sheet metal trades and the other trades that go with it, the plumbers and the floor covering, the painter and so on.

Q. Where had you planned to put these people to work if the changes had not occurred?

A. The first U. S. Lines ship.

Q. Now, what effect did this have on the Yard, this layoff?

A. Well, layoffs are one of the unpleasant events that occur in shipyards and it is extremely unfortunate for the shipyard that layoffs of this kind did occur, particularly at the season of the year. It's awfully hard to explain to people that somebody had to change the quarters on a ship and their husband is going to be laid off before Christmas. This is a most difficult situation.

[1022-1024]

Q. Referring to the ship repair job in June of 1964, I believe it was the Cuyahoga ship repair, did Sun plan for the full extent of ship repair involved in that particular job?

A. No.

Q. Why, Mr. Atkinson?

A. Well, the job was bid sight unseen. The ship was on the beach off Chile, and she had gone aground off Chile. The underwriters took bids on a per pound base, and the divers report indicated a certain quantity of work that might be done. It turned out when the job actually came

in that the diver's report, after we had bid and had been awarded the work it turned out that the diver's report didn't bear a lot of relation of what actually turned up on the job.

But I think you will find that job was fundamentally a steel job, and—let me go a little further with that job.

I would say the steel work on the job was perhaps twice as much as we originally thought it would be. We had a situation where the ship was placed at a pier and some of the pipes were clogged with sand, and some of our people, unfortunately, didn't have some of the sea valves closed and unclogged the pipes and the water came in and the ship sank at the pier. So that there was a substantial amount of work that was involved in that time frame that we had not counted on.

But this type of work I don't believe is the type or work that is important in the context of what we are talking about here.

[2365-66]

Q. So it wasn't entirely—the work didn't entirely involve steel workers?

A. No, certainly not, but the large bulk of the number of manhours used were steel.

[2367]

Q. Do I gather from your testimony, Mr. Atkinson, that the application of approximately 200,000 manhours on the Cuyahoga in 1964 did not effect the orderly completion of U. S. Lines ships?

A. That is exactly right. It would have nothing to do with it.

I might add as an aside to help you on that, Mr. Gomez, our general manager of the plan was in Japan during that period and I was the substitute general manager when we sunk the ship. So I have some knowledge of the

manpower that went into the job and what actually happened from the standpoint of directly supervising the work at that time.

Q. Were there any requirements from the diversion of manpower from United States Lines vessels to the Cuyahoga in order to complete that job?

A. From the United States Lines vessels?

Q. Yes.

A. I am sure there would have to be steel workers diverted from some of the U. S. Lines ships in order to do that work.

Q. Did you think this diversion had no affect on the orderly completion of the U. S. Lines vessels, in your opinion?

A. That is correct. Let me cite a typical example. Let's take one of the steel crafts for the riveters for instance. There was a major amount of riveting work on this particular ship. The U. S. Line ships, let's say the first ship, I don't recall when it was launched, but I would assume it was probably launched in the spring of that year before we even got the job, and I think you will find that in all of those steel trades the same kind of thing will apply, that in general the steel hull at the stage of the game caused no difficulty in delivering the ships.

The ships in general were delayed by electrical installation, electrical check out, electrical testing and the things that go with it.

[2367-68]

MR. DILLON

Q. And isn't it true that really you knew in January, 1969, that this addendum had added to the engineering task for Sun?

A. I was aware of it somewhat added to their problems, but I was not aware of five or ten thousand hours.

Q. What did you think it added to their task? What did you think it added in January 1969?

A. As I told you, I didn't make a computation at that time that I can recall, but I assumed probably on the order of 2,000 hours.

Q. Let's suppose that 23 and 48 had never been issued. Do you think the ship would have been delayed in delivery any time at all by the addition of the addendum No. 1?

A. Yes, I do!

Q. How much?

A. Well, again, that is hard to say, but—

Q. A week?

A. Perhaps a couple of weeks.

Q. Two weeks? Is that what you mean by a couple?

A. Yes.

Q. So it would have delayed Sun's scheduled delivery by about two weeks if the addendum had been there without the changes.

A. That is a curbstone estimate.

[1532]

A. As I indicated, I now feel that the first ship, hull 629, would have been delivered somewhere between 30 and 0 days prior to contract delivery date had it not been for changes 23 and 48.

Q. The precise period of time. If you had to make the precise period in terms of time what would you say?

A. It is not possible to pick up the precise date under the circumstances, I would say 15 days prior to the delivery date.

[1476]

Q. Paragraph one says, in effect, that the changes added about 75 days of work to the contract.

A. It does.

Q. Was that your opinion when you wrote the memorandum on January 13, 1969?

A. It was.

Q. Is that your opinion today? Paragraph No. 2, would you look that over, please.

A. I read it.

Q. In essence, it says that Sun has a history of delivered Marad replacement ships ahead of schedule; that the building schedule called for such an advanced delivery and that the yard had sufficient motives to proceed on that advanced delivery schedule; isn't that what it says?

A. It so says.

[1502]

MR. GALLOWAY

Q. Do you have any knowledge of the impact of the automation change on the engineering staff of the Sun Shipbuilding and Drydock Company during that period of time?

A. Yes. I think the impact chiefly was in the higher talent of the engineering department, because of the newness and because of the technology advances. Most of the efforts in the beginning were devoted by Mr. Zeien, members of the Chief Engineers who at that time I believe were John Lancaster—and by the Chief Draftsman, Mr. McNeal. There were almost daily meetings, discussions with the owners and regulatory bodies that took place during this period of time, and vendors.

Q. You stated earlier that these changes were not typical change orders; is that correct?

A. These by no means were typical with our experience previously.

Q. What kind of input of managerial supervisory talent was required to do the work required by the change?

A. To repeat: These were most unusual changes. They required non-routine handling. When you have non-routine handling, the top people must devote a great deal of time to it.

Q. Mr. Galloway, you are familiar with SS-24, which is Sun's estimate, final estimate, on these changes?

A. Yes, sir.

Q. You are familiar with the section of that estimate which relates to congestion and disruption, are you not?

A. Yes.

Q. Were you present in the yard daily during the performance of the work required by this contract and these changes?

A. Almost daily.

Q. Is it your practice to get out into the yards on a virtual daily basis?

A. Yes, sir.

Q. Are you reported to and concerned with the actual performance of the work?

A. Yes, very much so.

Q. And do you have an opinion as to whether or not Sun did actually encounter any congestion and disruption in the performance of these contracts by reason of Change 23 and Change 48?

A. Yes, I have an opinion. And the estimate bears this out, that such congestion took place in rather critical areas of the vessel.

Q. Particularly, where did the congestion take place?

A. Of course, the two major areas were in the engineroom, with the console installation, with its associated changes. Of course, the quarters was the other area.

The engineroom, in particular, I would say, had far more difficulties and was more demanding than would be expected under a normal construction schedule and a normal type of effort.

Q. Why was that, sir?

A. Well, the length of time to perform the work was decreased. If you have certain work to perform, the only way—in a time plan, and you decrease the time available—the only thing you can do is to put more people in that area. You apply more manpower than you feel is a direct way of doing it. During this period of time there were heavy pressures for delivery of the vessels. Executives of U. S. Lines were quite outspoken in the need for those vessels, and Mr. Purdon, on more than one occasion, called me as to what could be done to advance delivery schedule.

Q. Have you reviewed the calculations of the congestion claim which is contained in SS-24?

A. I have, but not for some time.

Q. At the time you did review it, did you have an opinion as to whether it was a fair and reasonable estimate of the congestion that actually occurred by reason of changes 23 and 48?

A. Yes, I did, and I thought it was a fair and reasonable figure. I think Mr. Maling and myself attempted to think through the congestion that had occurred and what impact this might have on an individual man, and I think that the figure that was there—I do not remember the exact result—represented a small fraction of a man's time in the associated areas. I would have to go through that exercise again, but if I remember right it was somewhat on the order of ten minutes per day per man for the construction period.

Q. Can you give us some specific examples of disruption of your work schedule caused by the issuance of Change 23 and Change 48?

A. Say, it starts first with the impact on the yard of not having plans in sufficient time, that such plans can be

reviewed and work properly planned. I think we all do much better when we have been able to review and study the work ahead, so that we can do proper planning and proper production control records. So, as far as the effect on the yard, you start first with the effect in not having plans in a sufficient time or satisfactory time to do your planning properly. In many cases, in this area, the yards were not only climbing up on the backs of the people in the engineering department but in some cases outdistancing them in the actual production. It was almost a daily—in some areas—hand-to-mouth type of issuance of information. Some of it was given in a preliminary fashion rather than in a final fashion, so that the yards could keep progressing as best they could.

In the engineering development, there were a number of modifications that were made to drawings. These modifications, of course, get into the so-called system, and they finally get issued.

This, in turn, has an impact on the ability of the yard to follow through in an orderly fashion.

The net result was the compacting of the time available, and, in most instances, an increase in the work content to be done.

Of course, the net result of that is that you just overman, and you attempt to squeeze five pounds of something into a one-pound bag, and that was done to the degree that we felt as we expressed in the claim that we have made.

Hearing Examiner Pfeiffer: By "congestion," you mean too many people around and they can't work?

The Witness: Too many people in the area.

Obviously, if a sheetmetal man is doing work, duct work over the top of the console, the guy in the

console is not doing as good a job as he should. If you have a staging up for pipefitters, this, in turn, means that you have interferences with other crafts getting onto the ship. We have certain things what we have learned over periods of time as to what the proper manning of a ship—or at least, when we say "proper", what has been the most effective manning for us to have on a ship,

We know that when we depart from that effective manning, you are going to get congestion and interference with the crafts.

Even men getting on and off the ships becomes a problem of that kind entering into it. You have to service just that many more men. I think, in your visit yesterday, you saw the number of welding lines that were going down into the engineroom. This, of course, is dependent upon how many people you are putting in there. If you put twice as many people, you are going to service them with twice as many welders for the draft.

[309-314]

Q. Do you believe that this calculation of that amount is a fair and reasonable estimate of the disruption that actually occurred?

A. I do.

Q. Can you give us specific examples of the way the yard was disrupted, by reason of the issuance of these change orders?

A. I think Mr. McGowan's testimony on the disruption in the engineering was self-explanatory, that the engineering functions of our company, due to these changes, were considerably upset, not only in the change work but also in the unchanged areas of the vessel. As the result of this, plans were late, preliminary drawings were issued.

Information was not always available when needed. The impact upon the yard's production forces was great.

The engineering function or the development function of a design is essentially a planning function. These are the people that make sure that information is available when needed. If the information is not available at the proper time, it means that the people in the yard must work around such obstacles. They must do parts of the job parts of the task, rather than doing the whole task. As an example, if you do not have, we will say, the switchboard or the panel boards there, you run cable and you leave cable coiled up because there is no place to connect it into. If you do not know, when you do the mold-loft work, as we saw it yesterday, where piping is going to go or whatever penetrations are going to be necessary, you may later have to do this at a time when it is not the most convenient time to do it. Not only do it at not a convenient time, but you do it at added costs to attain the same thing that you could have done in a more orderly manner in an earlier period.

As a production person, I am rather at a loss to understand how one can conclude that there is—yes, disruption in the engineering of some magnitude, whatever it is, either twenty-five thousand or something between zero and twenty-five thousand and not expect that this will have a concurrent effect on the production forces when the two portions of this job were going together at the same time. Here we have a couple of major changes that are issued well after the start of construction. As a matter of fact, as I remember, on both keels, we were well along at the time of the second quarters change. Both keels were well along at the time that the automation was finally worked out with everybody concerned, and the information with which to perform the

tasks that are required would necessarily have to be not issued in the proper sequence or in the proper time.

To come to any conclusion other than disruption in engineering being done concurrently with production efforts, that it does not cause disruption efforts, it just seems to me to be a far-fetched and a rather completely arbitrary type of decision.

I think we can have disagreement as to how much disruption is a reasonable amount to claim. But to claim that there is not any disruption at all, when you have to take a foundation for a console that has to be put into the ship probably three or four months after the right time for putting the console foundation in, being put in the ship through either a sideport or an opening in the forward hold, rather than putting that foundation on in the shop, when the flat was going out, and come to the conclusion that is not disruption is just ridiculous.

I mentioned one thing, of the foundation here. We had pumps, piping, electrical work, switchboards, the quarters changes. As far as the galley equipment, I guess the final design of the galley was even as long as six or eight months after the quarters was started. All the while, work was proceeding and progressing.

I could go on.

[370-372]

Q. Where had you planned to use this increased labor in late 1963 and early 1964?

A. On pressing the completion of No. 629 and No. 628.

Q. Were they in position to receive the input of this labor?

A. The ships were not in condition.

Q. Basically, what kind of labor are we talking about here?

A. We are talking about skilled and semi-skilled people that work with their hands.

Basically, people like electricians, joiners, sheetmetal people, and outfitting personnel for the ship.

Q. So that we are not talking structural trades.

A. No, only to the extent that structural trades do perform some service for the outfitting trades, as such. But, generally, we had steel structure that was going ahead.

Q. Did you institute a substantial lay-off program in the latter part of 1963 and 1964, in the yard?

A. Yes.

Q. What was the principal cause, in your opinion, of that lay-off?

A. The principle cause was that the ships were not in the condition to take the personnel that we had projected and planned to put them on.

Q. When you say "ships", are you speaking of U. S. Lines' ships?

A. U. S. Lines' ships.

Q. Why were they not ready to take the input of labor that you had planned in 1963 and 1964?

A. Because the ships had been delayed.

Q. Why?

A. Because of the changes principally that where automation and quarters changes.

Q. We are talking about the later part of 1963?

A. Yes.

[376-377]

MR. GRANT.

Q. You didn't make any objection to the original schedule calling for a July delivery date of the first ship in this flight, did you?

A. If that was the date I am not aware of any such objection.

Q. Therefore since you made no objection it must be assumed you concluded it was a reasonably realistic schedule.

A. Yes. Personally I—

[1413]

Q. Correct.

These show records starting from November '62, is that correct, I think. Now I am referring to document labeled "Shipbuilding Progress Report. United States Department of Commerce, Issue No. 175," for example.

A. Yes, sir.

Q. Now, those reports go by the month, am I correct?

A. Yes, sir.

Q. Well, let's start with the earliest month which I would say would be November '62. Does that monthly report give a projected date of delivery for the first Racer vessel?

A. The schedule date as provided for the delivery of the first ship was July 31, 1964.

[1424]

MR. LOWRY.

Q. You haven't done it, have you?

A. No, I have not.

Q. Now, turning to page 2 of your memoranda you do agree that from a manpower point of view Sun could have delivered the vessel in July of 1964, do you not?

A. If the manpower was the only consideration.

Q. It certainly is a consideration, is it not?

A. Correct.

Q. So what you are saying here is that Sun had the manpower that was necessary to complete the ship by July 15, 1964.

A. No, I didn't say they had the manpower.

Q. What did you say?

A. I said if they had the manpower.

Q. Well, do you say they didn't have the manpower of 660 men?

A. Sun Shipbuilding has, let's not confuse the 660 with the one ship. They are building five ships so you would have to add all these together at any point in time and it would probably amount to, I haven't figured it out but it might amount to, over 2,000 men.

Q. Let's stop fencing. We are talking about delivering the first ship in July of 1964. What would the average manning have to be as per your calculations in order to deliver that first ship in July of 1964?

A. I have 500 men per day, I believe, here, and with a peak of 660. Is that what you have references to?

Q. It is your memorandum. Isn't that what it says?

A. This is what I am reading, the third paragraph.

Q. Isn't it true that Sun had those men available if they chose to use them?

A. Yes, I guess they did.

[1286-87]

MR. MALING.

Q. Mr. Maling, you have in front of you a copy of SS-24, which has been previously identified as Sun's final estimate.

My first subject for discussion is:

How did you calculate the delay which Sun incurred by reason of changes 23 and 48?

A. The basic delay was approached from as many directions as we could, to come up with a reasonable assessment of the actual delay. Somewhat as we did in hardware, where we established the scope of the change prior to and started from there; we looked at our building

schedules of June, 1963, I believe it is, and that was our intent at the time to deliver. We then looked at the final date of November 12, and this represents some 120 days, basically, for the first ship. Successive ships were controlled by the first ship. This appeared to us to be the clear intent of delivering in July as against the actual in November. Then, we tried to look at it from another viewpoint, as to what caused those 120 days of delay, and we concluded that they were caused by the changes.

[535-36]

Q. Correct me if I am wrong, Mr. Maling.

You arrived at the 120 day delay computation I believe by starting with the early scheduled date, internal date, by Sun?

A. That is correct.

Q. And going to the actual delivery date; is that right?

A. That is correct.

Q. Would you just give me the mathematics as to how it comes out to 120 days?

A. May I use the board?

Q. Certainly.

A. Could I have the correct date, so that there will be no misunderstanding? November 12 is the actual first ship and July 15 is our scheduled delivery date on our schedule at that time. July 15, August, September, October, November, one, two, three, four months, thirty days a month, 120 days.

[693]

Q. Up above this chronological series of events, you have the imposition of the automation change in 1963.

Following that, you have the first quarters change in September of 1963, and the second quarters change in February of 1963 (sic). Is your testimony that the changes were the only significant causes of delay in the delivery of these vessels?

A. Yes; it is.

Mr. Gusmano: What changes are we referring to, Mr. Gomez?

The Witness: The changes on automation and quarters, the subject of this hearing.

Q. Is it your testimony that the heavy repair work experienced by you in the latter part of 1963 had no effect upon the delivery of these vessels?

A. That is correct.

Q. Is it your testimony that the heavy repair work that occurred in the middle of 1964 had no effect upon the delivery of these vessels?

A. Absolutely correct.

[755]

Mr. Runzer: It is my understanding that counsel is now willing to stipulate that if called, Mr. Maling will testify that during the period which has now been defined as the summer and fall and winter of 1963, extending into 1964, the average number of people available in the Sun engineering department to work on the U. S. Lines contract was approximately 85 men.

[2401]

MR. McGOWAN.

Hearing Examiner Pfeiffer: All right. There is a 105 day period. I want to know just where was the delay and to what it is attributed.

The Witness: We say this is a cumulative succession of events. At the outset the structural plans were—

Hearing Examiner Pfeiffer: Which, these vessels?

The Witness: These vessels. I don't concern myself with the Atlantic Heritage. I don't think it had a thing to do with it for the simple reason that it was delivered six months before the first United States Lines vessel was going to come out. So in my judgment it should have no bearing at all.

[1933]

MR. McNEAL.

Hearing Examiner Pfeiffer: Mr. McNeal, did your experience in connection with this, with Change 23, permit you to express a judgment as to how many days delay on the delivery of, let us say, the first ship Change 23 accounts for?

The Witness: Well, I can answer you better in terms of what I felt the impact it had upon the development of the electrical design were, because the answer, a complete answer, to your question would have to take into account the amount of slack that really existed in the schedule, in the delivery date schedule, and that is a detail I don't know anything about.

Hearing Examiner Pfeiffer: I don't want to get into that. I am just talking about days now.

The Witness: In terms of the impact on the electrical engineering work it was my judgment in 1963, without having ever designed such a system, that the impact could be as significant as the six months on us,

was likely to be in the area of three or four months, and certainly I didn't want to accept anything less than a lengthening of my schedules by my superiors of less than three months. I felt that that would have been an unreasonable requirement.

It was not so much a matter of planning, whether I double the manpower and put more men on it, as it was the problem of simply getting the information back and forth between our vendor and, as it turned out to be, G. E., which I didn't know at that particular point, and ourselves, the owner, making clear an understanding to the people involved in all parties.

You see the atmosphere that I was led to understand we were working under at the time we took this change order was one of a mutual cooperative effort to obtain the best possible job, and this required us to first take a look at our responsibility with respect to the centralized control system, and to go that extra half mile or whatever it might be to make certain that we did our job as carefully as we professionally were able to do, because we recognized, we felt at least, that the owner had limited information about such electronic equipment, he said he did, and the design agent professed to be limited in his knowledge about solid state electronics, and while we had people who were knowledgeable, I cannot say we were exactly experts at that particular time.

The selection of our vendor took that into account, too. We could have picked other vendors. We might have even negotiated a better price from some less capable vendor, but we took the risk of having less than good quality job or a job less than that which we would be proud of.

So, based upon that understanding and the atmosphere that existed then and in the invitations from the

owner to make all suggestions that we possibly could not only to costs, reduce our original estimates for the change, but to improve the reliability of performance of the system, we acted that way, and with that in mind I made estimates of those amounts.

I feel that I should have had at least four months extension of my schedules, our drawing schedules, and completion of purchase specifications and other things. I don't know whether that helps you.

[1173-75]

MR. PURDON.

A. . . . I had been discussing this back and forth with Maritime. Other companies were doing it, but everybody was doing it in a hypothetical sense.

It became clear—to me, at least—that until someone took a chance and built the hardware, we would never resolve the problems. Therefore, I finally persuaded U. S. Lines that we had an opportunity to provide technological leadership if the company was willing to take a chance on the benefits.

We decided on a pattern of the kind of automation we would try for. In Boston, actually, I spoke to—no; I was going to Boston, to Quincy, to launch one of our first ships. Robert Kennedy's wife actually christened the ship.

I called Mr. Alexander, the Maritime Administrator, beforehand, and said, "I will see you in Boston. My company is willing to move forward without any guarantees from the labor unions or anything else, but we have decided we will go for automation if the government has the funds."

He said he would make inquiry and we would talk further about it in Boston. We did. I think it was at the Ritz Hotel in Boston. I said to him, "Do you have the money?" meaning the government's share of construction subsidy for this feature. He said yes.

[479]

MR. SNOW.

Hearing Examiner Pfeiffer: Show me on which of the two pages which are labeled August 14, 1964 is this remark. Is that in the machinery operations?

The Witness: Yes.

Hearing Examiner Pfeiffer: The first page on the machinery operations.

Q. At several points you referred to Sun being behind schedule on 629. What schedule were you speaking of?

A. Well, the contract delivery dates.

Q. Mr. Snow, when a ship is constructed, is it considered good practice to finish half the ship before the other half; that is, one complete bow half of the ship before the stern half?

A. Usually, you build from the middle out to the end.

Q. Generally speaking, isn't it true that good shipbuilding would have the thing proceed in an orderly fashion, not necessarily have one part jump way ahead of another part?

A. I would think that once you had your structure in, if you are talking alignment, you would want to. Don't forget these ships are in the water. You would want to do your alignment work as quickly as possible. I would have to say that this was your best schedule as to what you could accomplish.

Q. At the time this alignment was going on, during the summer of 1964, was not there work going on associated with the erection of the quarters and with the work required under the automation change?

A. I would say so. I don't think it would have any effect on it, though.

[358-360]

Q. You said that Sun, in April of 1963, was behind schedule; is that correct? That is, on Hull 627.

A. Yes. The date I have been using right along is March 1st. That is where it spells out the 233 drawings still not issued and behind schedule.

Q. How far behind schedule were those 233 drawings?

A. I would have no way of knowing.

Q. Was it a day?

A. I wouldn't know.

Q. You don't know whether they were issued on March 2nd, do you?

A. I would say it would be highly unlikely that they would be issued on March 2nd.

Q. But you don't know?

A. I have no knowledge.

[376]

Q. Did they have the physical capacity in the yard to finish the work between April of 1963 and July of 1964?

A. If they applied the necessary manpower, there is no question they could have.

[381]

MR. YOUNG.

Q. When did you first learn they intended to deliver the ship in July of 1964?

A. I don't think I ever really found out definitely.

Q. Do you know there has been previously introduced in evidence a MarAd report showing the delivery in July?

Mr. Gusmanno: You are asking the witness of his own individual knowledge.

Mr. Runzer: He said he reviewed the MarAd construction reports.

Hearing Examiner Pfeiffer: Do you know or don't you know?

The Witness: I knew the dates were in existence.

Hearing Examiner Pfeiffer: Did you know what the dates were?

The Witness: I was never told officially. I knew what the dates were.

Q. We are not asking that you be told in some formal manner. When did you learn by any source that Sun intended to deliver the first vessel? July of 1964?

A. I don't remember just when it was.

Q. Was it before the first vessel was delivered?

A. I would say so, yes.

[439]

A. I am just trying to develop what services what way.

Q. First, let us see what is located there.

A. I don't know.

Q. You would agree, of course, if there are four cranes there, and if they physically could service the way involved, which is eight-way, that the crane casualty did not have the crane capacity; is that correct?

A. Yes, sir.

Hearing Examiner Pfeiffer: In your direct testimony you had seven days of delivery delay on keel 629 and five days on something else; or am I in error on it? Did you have five days on another keel?

The Witness: Those estimates, actually, even Mr. Gusmano was asking me. I was trying to equate this lost time into delay days, delay on delivery. I didn't actually have the calculation at that time.

Hearing Examiner Pfeiffer: Are my notes in error? I have seven days on 629 and five days, but I don't have a number next to it.

Do you have something, Mr. Runzer? I am referring to No. 2 on 23. I have seven days delivery delay on 629 and five days underneath it.

Hearing Examiner Pfeiffer: Do you remember that testimony, Mr. Young?

The Witness: I wouldn't say offhand.

Hearing Examiner Pfeiffer: On your notes on USL 30, did you attribute any delay time to hull 630 from this time, which I understand to be SD-1 in USL 30, as compared to No. 2 in USL 23?

The Witness: I attributed it to 629.

Hearing Examiner Pfeiffer: You attributed all the lost time, forty days, to hull 629?

The Witness: Yes, sir.

Hearing Examiner Pfeiffer: And if you then applied your one/third theory, that means what? Twelve days of delivery delay to hull 629?

The Witness: Yes, sir.

Hearing Examiner Pfeiffer: As opposed to what you gave us before, seven days to 629 and five days to 630?

The Witness: But that was on the specific item.

Hearing Examiner Pfeiffer: It's the same item in this case?

The Witness: Not after it was averaged out.

Hearing Examiner Pfeiffer: When you average it out, you don't have anything attributed to hull 630, do you?

The Witness: No, I don't.

By Mr. Runzer:

Q. You were at the yard for quite a number of years; is that correct?

A. Yes.

Q. And you have said in USL 23 that this crane casualty halved the crane capacity with reference to 629, didn't you?

A. Yes.

Q. Are you sure of that?

A. At this particular time, January of 1969, this is our recollection.

Q. It is your sworn recollection here today, which is December 15th, 1969?

A. That's right.

Q. I want to know if you are sure what you told Mr. Pfeiffer under oath is correct.

The Witness: I don't think I said it halved the available service.

Q. Did you indicate that that was an incorrect statement in USL 23?

A. No, I didn't.

Q. You were hoping we wouldn't find it out?

A. I am not sure on January 19th, 1969, as to what happened back in August of 1963.

Q. In other words, you are saying you don't know if it halved the crane capacity?

A. I don't know. I wouldn't say that.

Q. You wouldn't say you don't know, or you wouldn't say it halved the crane capacity?

A. I wouldn't say at that time it halved the crane capacity, no.

Hearing Examiner Pfeiffer: I am now referring to No. 2 of USL 23. Is the entire narrative of No. 2

in the notes of a report of 8/31/63 or only part of it and you added something?

When you said this halves the available crane service, is it something you added of something which was in the report of 8/31/63?

Mr. Runzer: I would like the record to show the witness is referring to still another document.

Mr. Gusmano: What are you looking at?

The Witness: Actually, an excerpt from the construction report.

Mr. Gomez: In response to Mr. Pfeiffer's question of whether or not the source of that fact—that is, halving of the crane capacity—was in the document dated August 31st, 1963?

The Witness: In the memorandum, yes; I added it in the memorandum.

Hearing Examiner Pfeiffer: And by that, you mean USL 23?

The Witness: Yes, sir.

By Mr. Runzer:

Q. When did the crane casualty take place in August?

A. The exact date I cannot recall.

Q. The middle of the month; the beginning of the month?

A. I would have to look it up. I really couldn't say at this time.

Q. Was it before August 31st, 1963?

A. Yes.

Q. The document—did you write a report to Mr. Bachko dated August 31st, 1963?

A. Yes, sir.

Q. You write monthly progress reports?

A. Yes.

Q. Did you tell Mr. Bachko on August 31st, 1963, "construction has progressed at satisfactory rate during the month"?

A. Yes.

Q. What hull was construction going on at a satisfactory rate during the month of August 1963?

A. That was a general statement on all the hulls.

Q. All the hulls were going on at a satisfactory rate on August 31st, 1963?

A. Yes.

Q. The same month of the crane casualty?

Hearing Examiner Pfeiffer: What was the date of the crane casualty?

Mr. Runzer: He was unable to give it to me. I tried to lay the foundation first.

Mr. Gusmano: Without looking at any documents.

By Mr. Runzer:

Q. Do you have any documents which would establish the date of the crane casualty?

A. I don't think I do. A document of mine does not exist to establish it.

Mr. Gusmano: Your monthly progress report does exist.

The Witness: It doesn't give the exact date of it. It was some time during the month of August.

Q. The next sentence of your construction report says, "Crane casualty adjacent to ship way No. 8, keel 629, will probably slow this erection somewhat, although it is

not well enough along to require double crane service continually." Isn't that what you told Mr. Bachko in August of 1963?

A. Yes, sir.

Q. So that it wasn't really in a position to receive the efforts of this crane which had the casualty, was it, if the hull wasn't ready to receive the work of this crane which had the casualty in August of 1963?

A. Well, it is just a question of working one crane or two cranes.

Q. You just told Mr. Bachko, in August of 1963, that it, referring to the ship, "Is not well enough along to require double crane service continually." Didn't you tell him that in August of 1963?

A. That's right.

Q. The same month in which construction was proceeding in a satisfactory manner?

A. Yes, sir.

Q. With reference to item 14—

Hearing Examiner Pfeiffer: Before you proceed, I have another question. I refer you to this remark in USL 23, item 2: "repairs consumed several months." Was that written by you in your construction report of 8-31-63, or is that an addition on January 30, 1969?

The Witness: That is in the memorandum of January 30, 1969, not in the construction report.

[460-67]

Q. Isn't it true that during September and October and, indeed, at the very beginning of November, work was being performed on the ship relative to the centralized control system?

A. Yes.

Q. When did that work get finished, the automation work, how many days before delivery?

A. I would say right up until delivery they were still doing it.

Q. Was there also work going on in the crew quarters area almost right up to delivery?

A. Yes, sir.

Q. And that is work which was required to be added, changed or modified by reason of the issuance of changes 23 and 48, is that correct?

A. I would say so, yes.

[468]

MR. ZEIEN.

Q. Mr. Zeien, at the time—let me rephrase it.

Can you describe the impact of this automation on your engineering program for the ships 628 to 632?

A. The work involved in this inquiry was localized to the engine room of the ship, but it did not impact on the fundamental design of the ship. It impacted in every little detail of the ship, every little detail of the engine room of the ship.

The changes were such that every plan in the engine room, if it hadn't been drawn by this time, had to be modified, almost without exception, and the plans that were in process had to be modified. The plans that were to be prepared would be different from what they would be if there were no changes. They were not, in some cases, large changes. But they were little changes in some cases and large changes in other cases. There were perhaps 100 plans involved in the work. I say 100, but there were probably more nearly 150 plans involved in the work. The largest impact would be in the electrical area, but the impact would go beyond that into the piping systems and to the equipment itself, in some cases.

For instance, a large console had to be added to the ship which would have some arrangement difficulties. It is a console perhaps one and a half times as long as this

table and about the same width and a little bit higher. We had to find space for that. That is the only major piece of equipment that had to be added. But there were motor-operated valves in the thermometer wells, and electric cables, and soon, that had to be decided upon and then located in the engine room and the plans modified accordingly.

Q. On what personnel did the bulk of the work required by automation fall?

A. The initial impact is in the electrical area, since the console, which required some definition of this stage of the game, all we knew in April was that we were going to buy a console from someone and put it in the engine room. We are not sure what the console would look like. The definition of what was in this console would be six and eight months in evolving. The electrical cables and tubing, and so on, that were going to provide the connection between the console and the various motor-operated valves and pressure switches and temperature things would have to be run after the information on the console had been developed.

At the time we were planing this job, I had hoped that we would know all there was to know about the console by August; but, as a matter of fact, the console wasn't firmed up until—my recollection is January or February of 1964.

Our people are pretty skilled at working around these kinds of lack of clarity and lack of information, and we did. But it was at considerable expense, in terms of rework, when we guessed wrong, and there was a lot of time lost, on the part of my people, in trying to get straight on the information needed to do their work.

[841-843]

Q. And the breakdown between the two is appropriate?

A. The hours, of course, should be most heavily ascribed to the quarters change. The delay in plan work would probably be greater in the automation area.

Q. In your opinion, [was] the delay of the ship beyond the projected July delivery date to its November, 1964 delivery date as a result of the issuance of Changes 23 and 48?

A. I frankly think the delivery of that ship was a little earlier than I had expected.

Q. You mean the November date is earlier?

A. Yes. If you ask me when I expected it to be delivered, I would have to say that I don't know. I knew the delays that had occurred in the engineering end, and I think that the fact that the ship wasn't delayed any more than it was was a remarkable thing.

Q. But was the delay that did occur, the delay between the projected July date and the actual date of November, in your opinion, was that the result of the issuance of changes 23 and 48?

A. Oh, sure.

Q. Mr. Pfeiffer had expressed interest in one other question, which I will ask you, not knowing what your answer is going to be. Of the 120 days, approximately, that is the delay between July, 1964 and November, 1964, do you have an opinion as to the amount of that 120 days that could be ascribed to change 23 and the amount that could be ascribed to change 48?

A. I think that in spite of all of the delay that occurred in automation, which I think was probably—between the automation and addendum No. 1, which is confused with a little bit—my guess is that we were delayed in engineering perhaps five months due to that. But the nature of the quarters change and the timing of it led to the situation where the quarters I think controlled the delivery of the ship, except for the fact that there was additional

testing, and sea, trials, and so on, on the part of the automation.

To try to reduce that all to how to whack up 120 days, it is my guess that you would have to put about one month of it against automation and perhaps three months of it against the quarters. But, I think that if we had just had automation and no quarters, we would have been perhaps 90 days late. If there had been only automation changes, I think we would have been perhaps 90 days late. I think we spent perhaps five months extra on the engine room engineering. But some of that was because we had extra time. We had a lot of engineering capacity when this contract was placed in our hands, and we had the ability to squeeze perhaps two months out of it by attention to the matter. But I think the quarters change basically controlled the delivery of the ship, in spite of all that.

> Hearing Examiner Pfeiffer: How can you say 90 days for the automation, 90 days delay for the automation; and then the quarters delay, which was the controlling factor in the delay of the ship? The ship was only delayed 120 days. Is that right? Is that your estimate?
>
> The Witness: I think the quarters controlled the delivery of the ship.

By Hearing Examiner Pfeiffer:

Q. But only thirty days is attributable to quarters?

A. No, no. I say the other way around. I would put 90 days on the quarters and 30 on automation. I don't know; maybe this is confusing. Let me start over again.

I think the engineering in the automation area delayed the engineering about five months, and that the ship would have been delayed about three months, if there was only the automation change. Then, turning to the

quarters, I think the quarters delayed the ship quite a lot, and my guess is that they delayed the ship at least 90 days, also, maybe more than that.

By Mr. Runzer:

Q. Mr. Zeien, assume there was no automation and only quarters changes involving the time periods we are talking about.

A. Only automation—probably 90 days, I would say.

Q. No; the other way around. Assume no automation.

A. The same thing.

Q. The same thing?

A. Yes. I think if we only had quarters and no automation, which is an impossible circumstance, but if we only had that, I think we would have been about 90 days late.

By Hearing Examiner Pfeiffer:

Q. You are just talking engineering. You are not talking production?

A. In this case, I am talking about production, because what happened on the engineering on quarters is that we built the quarters very inefficiently because the information was available so late. Normally, you finish the quarters plans in a ship three or four months before you need them. It is no sweat. It is a relatively straightforward task, and you go about it and get it done and turn it over to the yard and they go ahead and build the quarters. But we didn't build these quarters that way. It was on a hand-to-mouth basis. As we got straight on some new change, we issued what we call rip-out plans, which are not necessarily rip-out, but they are plans that we want the yard not to do because we know we are going to be changing that area. Then, as soon as we got the new plan

ready for that area, we would get it out in the yard and they would go ahead and do that.

The quarters were built—you can't build a ship on a fixed-price basis that way or you would go out of business. But the result of all that, I think the quarters plans were probably eight months late from what they should have been. I think it delayed the ship more than about three months, because of the sort of sandwiched approach to getting the work done.

[875-880]

Q. Mr. Zeien, have you ever seen SS-20 before?

A. Yes.

Q. And the date of delivery there of U. S. Lines 628 was what period of time shown by that schedule, what month?

A. The end of July, 1964.

Q. I show you SS-23, which is dated June 17, 1963. In what month is U. S. Lines 628 schedule for delivery on that schedule?

A. July 15.

Q. Going back to SS-20, the delivery date was in July of 1964; is that correct?

A. Yes.

Q. That was before the addendum?

A. That's right.

Q. After the addendum, the delivery date was in the same month; is that correct?

A. John, just to amplify it, I don't think the delivery date would have been based on engineering. We felt, when we undertook the addendum work that the engineering would be later than if we hadn't done the addendum work, but we didn't think that it would affect the delivery of the ship. Right, wrong or indifferent, we didn't think so.

[893-94]

IN THE

Supreme Court of the United States

OCTOBER TERM, 1976

No. 76-284

SUN SHIPBUILDING & DRY DOCK COMPANY, *Petitioner,*

v.

UNITED STATES OF AMERICA, *Respondent.*

On Petition for a Writ of Certiorari to the Court of Claims

BRIEF OF UNITED STATES LINES, INC. IN OPPOSITION

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On Petition for a Writ of Certiorari to the Court of Claims

BRIEF FOR THIRD PARTY UNITED STATES LINES, INC. IN OPPOSITION

OPINIONS BELOW

The Order of the Court of Claims is set forth in the Appendix to the Petition at Pages A 2-A 4. The Opinion and Recommended Decision of Trial Judge Mastin G. White is set forth in the Appendix to the Petition at pages A 5-A 25. The Orders of the Secretary of Commerce on review are set forth at pages A 26-A 30 of the Appendix to the Petition. The final Opinion and Order of the Maritime Subsidy Board are set forth at pages A 31-A 119 of the Appendix. The Recommended Decision of Paul M. Pfeiffer, Chief Hearing Examiner is set forth at pages A 120-A 214 of the Appendix.

JURISDICTION

The jurisdictional requisites are adequately set forth in the petition.

STATUTE INVOLVED

Section one of the Wunderlich Act (68 Stat. 81, 41 U.S.C. Sec. 321) is set forth in the Appendix to SUN's petition at page A 1.

QUESTION PRESENTED

Whether the Court of Claims significantly misapplied the substantial evidence test in finding that the Final Administrative Award of change costs to SUN was supported by substantial evidence on two contested factual issues.[1]

STATEMENT OF THE CASE

On October 10, 1962, a tripartite construction contract (No. MA/MSB-11) for the building of 5 vessels under the Construction Differential Subsidy Program was executed by United States Lines, Inc. (USL) (as the Owner), SUN Shipbuilding and Dry Dock Company (SUN) (as the Contractor) and the United States of America, acting through the Maritime Subsidy Board (the Board).

The contract had been let under the Maritime Administration's bid procedures and called for the completion of the basic contract work for $10,590,000 per vessel (an aggregate contract price of $52,950,000). Payment was to be made by USL (51.4%) and the

[1] While Petitioner has made reference to an additional factual issue (Pet. pp. 7, 8 and 28) it has limited in its argument to only two factual issues.

Board (48.6%), the government's portion being construction differential subsidy. (A 6)

SUN was obligated to deliver each of the 5 vessels on fixed contract delivery dates. (A 6)

At SUN's request the original sequence of delivering the first hull and the second hull was reversed. (A 110)

Sixteen days after Sun had laid the keel for the first of the five vessels, and 486 days before the contract delivery date for the first vessel, Change Order 23 was authorized and issued to automate the engine rooms on these vessels. (A 7) Pursuant to Article 4 of the contract SUN had provided a preliminary estimate of the change costs for automation at $300,000 per vessel. (A 33) This estimate was an essential factor in USL's decision to seek Maritime Administration authority to order change No. 23.

A related modification in the size of the crew quarters was authorized and issued as change No. 48 based upon SUN's estimate that the reduction in crew quarters would cost only $38,000 per vessel. (A 33) Again, authority to proceed with change No. 48 was premised on SUN's estimate of the cost. (A 141)

After delivery of the vessels (44, 33, 47, 48 and 60 days beyond the respective contract delivery dates) [2] SUN presented detailed revised estimates for basic change work and alleged delay associated costs, thereby raising its change cost claims from $1,690,000 to $5,740,-368 (including 10% profit).

[2] The final administrative award of change costs excused these delays and relieved SUN from its contract obligation to pay liquidated damages for late delivery totaling $510,400 (i.e., 232 delay days x $2,200 per day in liquidated damages pursuant to Article V of the Contract Special Provisions).

THE PROCEEDINGS BELOW

As provided for in the contract, the Contracting Officer subsequently reviewed SUN's claim and determined that $2,200,000 was the reasonable and recoverable amount for the change work (including profit). (A 8 and A 125)

Thereafter under the disputes clause a full *de novo* adjudicatory hearing on SUN's claim (which SUN had then escalated to $6,688,893 (A 125)) was held by the Chief Hearing Examiner of the Maritime Subsidy Board who recommended a total award of $3,732,863 which *inter alia* found based on the conflicting evidence of record, that SUN could not have delivered each vessel more than 15 days in advance of the contract delivery dates even if Change Orders 23 and 48 had never been issued. (A 192-A 204)

Exceptions were filed by all parties to the Recommended Decision and the Maritime Subsidy Board acting under the Disputes Clause reviewed the evidence of record, modified the recommended decision to result in an award of $2,798,882.35, and in so doing, as here pertinent, found that even without change orders 23 and 48, SUN would not have delivered the vessels in advance of their respective contract delivery dates because of non-change related delay factors. (A 73-A 78)

Following Petitions For Review And Reconsideration the Secretary of Commerce reviewed the administrative determinations below and as here pertinent affirmed the decision of the Maritime Subsidy Board except to reinstate the 15 days of pre contract delivery date delay resulting in an award of $3,070,547.95.

SUN filed a Petition in the Court of Claims alleging that the final Administrative Award of $3,070,547.95

should have been "in excess of $7,000,000" which amount SUN in its Motion for Summary Judgment reduced to $4,379,656.95, an amount which would exceed the award below by $1,309,109. Pursuant to a Motion of the United States, USL was noticed as a third party before the Court of Claims.

Upon Cross Motions For Summary Judgment, Judge White of the Trial Division of the Court of Claims issued Recommended Decision which, after examination of the record presented by the parties, determined that there was substantial evidence to support the determinations of the final administrative decision on all issues raised with the exception of the claim for "hire-fire" costs.

Upon requests for review and after oral argument the Court of Claims adopted the determination of the Trial Judge on all issues with the exception of the "hire-fire" claim, which it rejected, holding that the determinations of the Secretary of Commerce, insofar as properly challenged by the parties, were neither arbitrary, capricious, unsupported by substantial evidence, nor legally erroneous.

ARGUMENT

Petitioner, SUN, presents no special and important reasons for the exercise by this Court of its certiorari jurisdiction and for this Court's involvement in the detailed evidentiary record of this case which the Court of Claims, the Secretary of Commerce, the Maritime Subsidy Board and a Hearing Examiner have all considered.

In substance, Petitioner's assertions amount to nothing more than a disagreement with decision of the

Court of Claims and an attempt to have this Court reassess evidentiary issues previously determined. In asking this Court to "conclude that the determination by the Department of Commerce was not *correct*"[3] SUN demonstrates its failure to understand the established function and standards of the "substantial evidence test" in Wunderlich Act review cases.

> "As we said in *Consolo* v. *Federal Maritime Comm'n*, 383 U.S. 607, 620, 86 S.Ct. 1018, 1026, 16 L.Ed.2d 131 (1966), 'the possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency's finding from being supported by substantial evidence.' It is not for the court to strike down conclusions that are reasonably drawn from the evidence and findings in the case. Its duty is to determine whether the evidence supporting the Commission's findings is substantial, *Universal Camera Corp.* v. *National Labor Relations Board*, 340 U.S. 474, 71 S.Ct. 456, 95 L.Ed. 456 (1951)." (*Illinois Central R. Co.* v. *Norfolk & Western Ry. Co.*, 385 U.S. 57, 69, 87 S.Ct. 255, 262 (1966)).

SUN's claim that the Court of Claims has misapplied the substantial evidence test is not supported by SUN's citation of the decisions in *U.S.* v. *Carlo Bianchi & Co., Inc.* 373 U.S. 709, 715 (1963) and *Universal Camera Corp.* v. *NLRB*, 340 U.S. 474, 488, (1951). There is no dispute that the term substantial evidence has become a term of art or that the substantiality of evidence must take into account whatever in the record detracts from its weight.

The Court of Claims was fully aware of the content of the substantial evidence test and its responsibilities under the Wunderlich Act as a reading of its Order

[3] Petition at p. 10, emphasis added.

and the Opinion of the Trial Judge show. As stated there:

> "For the purpose of the Wunderlich Act substantial evidence is 'such evidence as might convince a reasonable man, to support the conclusion reached by the agency officials' (*T.C. Bateson Construction Co.* v. *United States,* 140 Ct. Cl. 514, 518 (1960)), or evidence which could convince an unprejudiced mind of the truth of the facts to which the evidence is directed'. (*Koppers Co.* v. *United States*, 186 Ct. Cl. 142, 149, 405 F.2d 554, 558 (1968))." (A 14)

It should be noted that this test was uniformly applied to deny both USL's and SUN's challenges to the factual administrative determination of the number of delay days attributable to change orders Nos. 23 and 48. (A 12 and A 15).

Petitioner's claim that "only SUN presented substantial evidence" is clearly error as a reading[4] of the opinions of the Court of Claims, the Secretary of Commerce and of the Maritime Subsidy Board demonstrates.[5]

[4] For example and as pertinent to the two issues argued in SUN's Petition, conflicting substantial evidence is described by the Court of Claims at A 3, A 16 & 17 and by the Board at A 68, A 72-78, A 107-111.

[5] SUN fails to consider further that it must carry the affirmative burden of proving its claim by more than self-serving conclusory testimony. *Northbridge Electronics, Inc.* v. *U. S.*, 444 F.2d 1124, 1128 and 1129 (Ct. Cl. 1971); *Electronics and Missile Facilities, Inc.* v. *U. S.*, 416 F.2d, 1345, 1355 (Ct. Cl. 1969); *Sternberger* v. *U. S.*, 401 F.2d 1012, 1016 (Ct. Cl. 1968); *Consolidated Edison Co. of New York* v. *NLRB*, 305 U.S. 197, 229, 59 S.Ct. 206, 216 (1938); *Wm. A. Smith Contracting Co.* v. *U. S.*, 412 F.2d 1325, 1331 (Ct. Cl. 1969).

CONCLUSION

SUN's rather lengthy petition presents nothing more than a re-hash of its view of the evidence of record. There has been no showing that the Court of Claims misapplied the substantial evidence requirement of Section One of the Wunderlich Act to any degree whatsoever in affirming the final administrative award of change costs. It is clear that Petitioner's dissatisfaction with the ultimate findings of fact in this case raises no issue which could warrant review by this Court in the exercise of its sound judicial discretion under Supreme Court Rule 19.

It is therefore respectfully submitted that the Petition for a Writ of Certiorari should be denied.

Respectfully submitted,

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No. 76-284

In the Supreme Court of the United States

OCTOBER TERM, 1976

SUN SHIPBUILDING & DRY DOCK CO., PETITIONER

v.

UNITED STATES OF AMERICA

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF CLAIMS

MEMORANDUM FOR THE UNITED STATES IN OPPOSITION

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In the Supreme Court of the United States

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No. 76-284

SUN SHIPBUILDING & DRY DOCK CO., PETITIONER

v.

UNITED STATES OF AMERICA

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF CLAIMS

MEMORANDUM FOR THE UNITED STATES IN OPPOSITION

Petitioner, the Sun Shipbuilding & Dry Dock Co. ("Sun"), seeks review of a decision of the Secretary of Commerce establishing the amount of additional compensation due petitioner for work performed pursuant to authorized changes made in a standard government construction-differential subsidy contract. The Court of Claims held that the Secretary's decision, which awarded petitioner $3,070,547.95, was supported by substantial evidence (Pet. App. A27).

1. In 1962, petitioner entered into a contract with the United States, acting through the Maritime Subsidy Board (the Board), and United States Lines ("USL"). The contract provided that petitioner was to construct five cargo vessels for USL. In turn, USL was to pay 51.4 percent of the $52,950,000 purchase price while the United States was to pay the balance as a construction-differential subsidy pursuant to the Merchant Marine Act of 1936, 49 Stat. 1995, as amended, 46 U.S.C. 1151 *et seq.*

During construction of the vessels, USL, with the approval of the Maritime Subsidy Board, issued two change orders to provide for the automation of the engine rooms (Change Order 23) and to reduce the size of the crew quarters in each vessel (Change Order 48) (Pet. App. A 31). Petitioner constructed the five vessels in accordance with the modified contract except that it delivered the vessels to USL 44, 33, 47, 48 and 60 days beyond the respective delivery dates stated in the contract (Pet. App. A7).

When the parties were unable to agree on the amount of the additional compensation due Sun for the extra work occasioned by Change Orders 23 and 48, Sun submitted to the contracting office a formal claim in the amount of $5,218,516 plus a ten percent profit, for a total of $5,740,368 (Pet. App. A7-A8). On August 21, 1969, the contracting officer determined that Sun was entitled only to $2,200,000 including profit as the fair and reasonable value of the work performed pursuant to Changes 23 and 48. Both Sun and USL appealed to the Maritime Subsidy Board. Sun revised its claim to $6,688,895, while USL asserted that only $1,611,042 was allowable. Staff counsel for the Board contended that $2,040,003 was the appropriate sum (Pet. App. A8).

The claim by Sun for greater compensation was based on several factors. Most important, Sun claimed that the modifications prevented it from adhering to an advantageous expedited schedule (the "delay" issue) and forced it to lay off experienced workers and later replace them with less experienced workers (the "hire-fire costs" issue). The parties also disagreed on the normal capacity of Sun's shipyard to work on new-hull construction (the "normal hull production rate" issue).

Following extensive hearings, and *de novo* consideration, the Board's hearing examiner issued an exhaustive decision (Pet. App. A120-214), recommending that Sun

be awarded $3,820,120, including profit. The Board, after allowing oral argument and "after careful review and study of the entire record and after much deliveration," also issued an exhaustive decision (Pet. App. A31-A118) modifying the hearing examiner's recommended decision. The Board held that Sun was entitled to an award of $2,798,882.35 (Pet. App. A119).

The Secretary of Commerce, upon petition, exercised his discretion to review the case and determined that, when claims "not easily susceptible to mathematical or other precise calculation" were at issue, "the Board should not have departed from the examiner's findings for which there was substantial factual support" (Pet. App. A27). The Secretary concluded, therefore, that "the claim items relating to the extent of pre-contract delivery date delay, the estimated number of service hours per month during the delay period, and the estimates of disruption effect in terms of production and congestion, should be disposed of in accordance with the examiner's views" (*ibid.*). In all other respects, the Secretary adopted the Board's decision. Accordingly, on January 20, 1972, the Secretary found that petitioner was entitled to the sum of $3,070,547.95 (Pet. App. A28). On February 15, 1972, the Secretary declined to reconsider his decision (Pet. App. A29-A30).

2. USL refused to pay its portion of this award, asserting that the amount was excessive. The Board paid its portion of the award but refused to pay USL's part. Petitioner then brought this suit in the Court of Claims (pursuant to the Wunderlich Act, 68 Stat. 81, 41 U.S.C. 321) seeking to increase the award to an amount "in excess of" $7,000,000 (Pet. App. A9). The United States thereafter asked that notice of the action be issued to USL and

USL answered petitioner's complaint by seeking to reduce the amount of the award.[1]

The trial judge of the Court of Claims held that substantial evidence supported the Secretary's decision on the "delay" issue and on the "normal hull production rate" issue (Pet. App. A10-A17; A22-A25) but not on the "hire-fire costs" issue (Pet. App. A18-A22). On May 28, 1976, the Court of Claims held that the Secretary's decision was supported by substantial evidence on all three issues (Pet. App. A2-A25).

3. Petitioner contends (Pet. 10-27) that there was not substantial evidence to support the Secretary's factual findings on the "delay" and the "hire-fire costs" issues. The Court of Claims correctly rejected that contention in an opinion on which we rely.

Regarding the "delay" issue, the Court of Claims (adopting the trial judge's recommended decision) found abundant evidence to support the Secretary's decision that Sun could have delivered the vessels only 15 days prior to the dates specified in the contract. The court noted testimony by the Deputy Chief, Office of Ship Construction, Federal Maritime Administration, that the first ship would have been delivered "somewhere between 30 and 0 days prior to contract delivery date had it not been for Changes 23 and 48" and that "under these circumstances, I would say 15 days prior to the delivery date" (Pet. App. A16).[2]

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[1]Petitioner also sought to recover from the United States, as indemnitor, USL's share of the award. On May 31, 1974, the Court of Claims granted summary judgment for the United States on this issue. This Court subsequently denied Sun's petition for a writ of certiorari (419 U.S. 1021).

[2]While petitioner attempts to show inconsistencies in the testimony of this witness (Pet. 14-15), the hearing examiner found

Moreover, the court noted "many delay factors which developed during the course of the construction of the five ships * * * which were related to Change Orders 23 and 48" (Pet. App. A16-A17). Accordingly, the court held that (Pet. App. A17):

> even if Change Orders 23 and 48 had not been issued, other delay factors would have prevented Sun from delivering each of the five ships at an earlier date than 15 days prior to the contract delivery date, and, therefore, * * * the issuance of Change Orders 23 and 48 did not cause more than 75 days of delay prior to the contract delivery dates for the five ships. Consequently, it must be concluded that the administrative determination to this effect is supported by "substantial" evidence, even though there is contrary evidence from Sun's witnesses in the record.

Turning to the "hire-fire costs" issue, the Court of Claims held (Pet. App. A3) that the record more than amply supported the Secretary's finding that petitioner failed to establish a causal connection between Changes 23 and 48 and the layoffs of workmen in the outfitting trades:

> [T]he Secretary of Commerce could permissibly find this conclusory and summary testimony [cited by petitioner] outweighed by (1) the inability of Sun's Manager of Industrial Relations, who was supposed to support with detail the conclusions of the high officials, to tie the lay-offs specifically to Changes 23 and 48; (2) the fact that under its own original

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(Pet. App. A198):

> In considering the reliability and probity of all the witnesses who testified on the delay cost issue, the Examiner was impressed by the objectivity, resourcefulness, and breadth of knowledge and experience of this witness * * *.

schedule Sun had anticipated a long delay (so long as to make it unlikely that it would have retained the workers in question) between the launching of the next previous vessel (the Atlantic Heritage) and the first of the five ships involved in the present contract; and (3) other simultaneous delay factors (including the interchange of the first two hulls), not attributable to Changes 23 and 48, for which Sun was itself responsible, and which would have made it improbable that the first United States Lines vessel would have been ready in time to receive the laid-off outfitting personnel from the Atlantic Heritage.

The evidence supporting the Secretary's decision therefore was more than substantial, and further review of this essentially factual issue is unwarranted.

For the foregoing reasons, it is respectfully submitted that the petition for a writ of certiorari should be denied.

ROBERT H. BORK,
Solicitor General.

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